

SELECTIONS
FROM
THE RECORDS
OF THE
GOVERNMENT OF INDIA,
(FOREIGN DEPARTMENT.)

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N^o. IX.

Papers

RELATING TO THE

TEAK FORESTS OF PEGU;

Calcutta:

THOS. JONES, "CALCUTTA GAZETTE" OFFICE.

1855.

(Copy.)

No. 4.

FROM

CAPTAIN A. P. PHAYRE,

Commr. of Pegu, and Agent to the Govr. Genl.

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,

Foreign Department.

Dated Rangoon, the 24th July 1854.

FORESTS.

SIR,

I HAVE the honor to submit for the information of the Most

Noble the Go-

vornor General

in Council, the

correspondence

and papers not-

ed in the mar-

gin, relative to

From the Superintendent of Forests, No. 82, dated 5th April 1854, with Report on the Southern Forests in Pegu and letter from Mr. Abreu, his Head Assistant. From ditto No. 3, dated 3rd May 1854, with drafts of notices Nos 1, 2 and 3, and From ditto No. 4, dated 4th May 1854, inviting tenders for purchase of Timber From Commissioner of Pegu to Superintendent of Forests, No 16, dated 18th May 1854, with a Statement of duties to be levied on Timber and Memorandum on the Report of the Superintendent of Forests. From Superintendent of Forests, dated 3rd May 1854, No 14, enclosing draft of a public Notice and revised Statement of duties to be levied on Timber From ditto, No 17, dated 29th May 1854 From ditto, No. 45, dated 1st July 1854, with copy of Rules.

the Teak Forests of Pegu, and the method of deriving a revenue from them.

2. In the original instructions with which I was furnished on this subject, there occurred the following sentence:—

“ All the Forests are the property of Government, and no general permission to cut timber therein will be granted to any one. The Superintendent of Forests will mark the trees which may be bought and felled. He will, for the present, be guided by the general principles under which the Travancore Forests are cut, and replenished by Nurseries. The price paid for the unfelled log will be inclusive of all duty. The Commissioner will hereafter report what amount should be fixed as the price per tree.”

After visiting some of the Forests, Dr. McClelland was of opinion, that it was impossible, by a plan restricted to the limits of the Forests, effectually to prevent persons cutting timber without license; and that

the best method of protecting the Forests from waste and ruin was by means of a Tariff of duties, which would prohibit all under-sized timber, and render timber liable to inspection, until it was brought to market. Agreeing with the Officiating Superintendent in this principle, the next point for consideration was the rate of duty to be established.

3. The rates proposed by the Officiating Superintendent as contained in Statement 3, appended to his Report, dated Prome, the 5th April 1854, would have rendered it impossible for any one profitably to have worked a Forest. This would certainly have protected the Forests, but at the cost of the ruin of Rangoon as a timber exporting, and ship-building port. In considering this question, I was of opinion, that the rate of duty on timber in the Province of Pegu, should not be generally higher than that taken at Moulmein. At that place a fixed rate of duty per log is taken, according to the river from which the timber is brought, namely :—

From the Attaram,	4	Rupees per log.
From the Thoungyeen,	2 12	per do.

This includes every kind of log and mast piece.

4. I at first proposed to place separate rates of duty on mast pieces and ordinary logs, as will be observed on reference to Statement A. appended to my Memorandum, dated 15th May 1854, on the report of the Superintendent of Forests. Further consideration and discussion, however, convinced me that the practice followed at Moulmein of putting one rate all round, on every description of timber (excepting crooks,) was the simplest and best plan. I chose, however, the higher rate of (4) four Rupees, because the Southern Pegu Forests are nearer to a market than those on the Thoungyeen River in the Tenasserim Provinces, and the timber of the former will probably be larger than that of the latter.

5. It will be observed, that Dr. McClelland (*vide* his letter No. 17, dated 29th May 1854, para. 3,) is of opinion, that by what he considers too low a rate of duty being imposed on timber, people will rush to the Forests indiscriminately, cut down the trees, and thus exhaust them. I am quite at a loss to know how this can happen if the Forest Department and Timber Revenue Department, which are both under Dr. McClelland do their duty. No trees are allowed to be felled, but those

which have been killed by the Forest Department, and which will be pointed out by the Officers of the Forest Department to approved purchasers; while all under-sized logs will be confiscated wherever found. This will constitute a check upon unlicensed felling of trees in the Forests, which, with vigilance in the Forest and Timber Revenue Departments, will be thoroughly effectual. But even were it not so, I consider the principle of Dr. McClelland's plan, that namely, of preserving the Forests by means of rates of duty on timber so high, as to render the working of them profitless, or barely remunerative, as being essentially wrong; I could not, therefore, in any case recommend its adoption.

6. I finally adopted, subject to the approval of the Most Noble the Governor General in Council, the rules for the collection of duty upon Teak timber, dated the 6th instant, a copy of which I have the honor to append. The chief points in them are as follows:—

1st.—Timber under five feet girth, will be confiscated.

2nd.—All timber of any length of, and above five feet girth, to pay (for the present,) a duty of four Rupees a log.

• • 3rd.—Crooks, the produce of branches, (this limitation is meant to prevent small trees being cut for this description of timber) to pay the same rates as exist at Moulmein, and which are enumerated.

4th.—Foreign Timber coming down the Irrawaddy and Sitang Rivers, to pay on the Frontier 15 per cent. of the value of the cubic contents to be calculated at 14 Rupees a ton. This is the rate as taken on similar timber, (under-sized,) at Moulmein.

7. I trust the arrangements now proposed will meet with the sanction of the Most Noble the Governor General in Council.

8. Under existing Notifications, all persons have been prohibited from felling timber in the forests without license; and as full-sized killed timber becomes available for the market, it is proposed hereafter to sell the right of cutting it to Contractors, who alone will have the right of entering the Forests for that purpose. A minimum rate per tree for each Forest having been fixed, tenders for each will be invited, the price being hereafter exclusive of duty.

9. There is one portion of the Forest question, namely, that of renewing them by planting, which Dr. McClelland has not entered upon.

He has informed me, that he wished for further experience before recommending any measures to be taken for that purpose.

I have the honor to be, &c.,

(Signed) A. P. PHAYRE,

Commr. of Pegu, and Agent to the Govr. Genl.

PEGU, COMMISSIONER'S OFFICE, }
Rangoon, 24th July 1854. }

(COPIES.)

No. 82.

To

CAPTAIN A. P. PHAYRE,

Commr. of Pegu, and Govr. General's Agent.

SIR,

I HAVE the honor, herewith, to submit my report on the Southern Forests of Pegu, together with a Statement of the general observations of my head Assistant Mr. Abreu on the subject, which I prefer submitting with my own Report to retaining as a mere office record; as it affords an opportunity of bringing to your notice a young man of promise and intelligence.

2. During my visit to the Forests, described in these papers, I found it necessary to modify some portion of the detailed establishment required for their local superintendence and conservancy as already sanctioned by the Government.

I found the information previously furnished by the four Goungs appointed on a salary of fifty Rupees per mensem each, to the charge of the Thounzai, Oakkan, Phoungyee, and Pegu Forests, to be quite incorrect; and that these persons, up to the period of their appointment, had never visited the Forests, and consequently that the information they supplied as the result of their own local knowledge was derived from the information of others.

3. On my visiting the Forests, the Oakkan and Thounzai Goungs both represented themselves as sick and unable to visit with me their respective districts, and the Phoungyee Goung absented himself altogether on the occasion. The Pegu Goung kept his engagement so far as to

join us as we were returning from the Forests, when we had completed our inquiries, and made the necessary arrangement for their local superintendence independent of him ; and at Pegu we learned from Captain Grant, Assistant Commissioner, that this man had also obtained from the Deputy Commissioner the appointment of Thoogyec which is quite incompatible with his duties in the Forest Department.

4. Under these circumstances, I nominated Kokhine, the head-man of the Magayee village, Forest Goung for all the Hlaine Forests, on the salary, previously sanctioned, of Company's Rupees fifty per mensem. This man was formerly Governor of the Hlaine District, and attended us throughout our inspection of the Hlaine Forests, when I had an opportunity of testing his zeal as well as of observing the estimation in which he is held in the district. In lieu of the two peons which have been sanctioned for each Goung, I have appointed the head-man of villages situated in the Forests, Deputy Goungs or Goung Gwais, on a salary of ten Rupees per mensem each, thus for the first time giving the residents of the Forests a direct interest in them ; and although the salary is small, yet, as it is for duties which lie at their door, I have no doubt they will be faithfully performed.

5. I had a difficulty in making the necessary arrangement for the appointment of Goung Gwai in the Oakkan Forests, from the undue local influence exercised by the Tikeoke of Oakkan, who is son of the lato Forest Goung. The head-man of Shawbone, the only village in the Forest, refusing to accept the office, assigning as a reason the enmity to which it would expose him from the Tikeoak. The Tikeoak and his whole family I have reason to know, are in the interest of timber-dealers in Rangoon ; and for this and other reasons I do not think him a fit person for the office ; he is too young and too loose a character. As an instance of the latter, I may remark his having been discovered in my camp playing cards with the Pegu sepoys, when eighty rupees were stated to have been lost by a boy of the son of the Thounzai Goung.

In the Phoungyee Forests I have nominated the head-man of Walmet and Wah villages to the charge of the Forests on the North-west side of the valley, and Ko Mhoun to those on the North-east side ; the latter resides at Phoungyee and was strongly recommended by the Phonejee of the place, as a sober respectable man ; his zeal and local knowledge

of the forests I had an opportunity of testing. In the Pegu Forests, for the present, I was obliged to be content with the nomination of one Goung Gwaikoan, the head-man of Zountoo village, although it may be necessary to appoint at last a second ; thus, instead of an expenditure of 280 Rupees per mensem for the local superintendence of the southern Forests, as the salary of four Goungs at fifty Rupees each, and two peons for each Goung, at ten Rupees each.

I have secured a more efficient local superintendence by means of one Goung at fifty Rupees, and eight Goung Gwais at Rupees ten each, being Company's Rupees (130-0-0) one hundred-and thirty. The difference shall be carried to the credit of Government in my monthly Abstracts, until this arrangement is properly tested, and, if found to answer, extended to the whole of the Forests.

I have, &c.,

(Signed) J. McCLELLAND,

Offg. Supdt. of the Forests, Pegu.

PROME,
The 5th April 1854. }

REPORT ON THE SOUTHERN FORESTS OF PEGU.

THE Yomah Mountains, the central chain of Burmah Proper, are extended into Pegu and form the spine, as it were, of the province with the valley of the Irrawaddy on the West, and that of the Sitang on the East ; and the several minor valleys lying between the off-shoots by which the chain is terminated on the South, as the valley of the Zamayee or Pegu River, the valley of Hlaine or Line River, together with the intermediate valley of the Phoungyee River or Paizoondown Creek, lying between the Hlaine and Pegu Rivers.

2. One of the most southern points of the Yomah lies between the Hlaine and Paizoondown Creek, of which the Pagoda Hill at Rangoon may be considered the last elevation, marking the direction of the chain or line of local disturbance.

From the village of Tonk-kyen, three marches North from Rangoon, a hill of a considerable elevation called Sitoung Town is seen bearing due East, and which is connected with a chain of peaks and ridges

which are seen extending towards the North, forming the boundary range between the Hlaine and Phoungyee Valleys.

In like manner from Pegu, another range of mountains may be seen in the distance bearing due East of that place, extending to the North, forming in that direction the valley of the Sitang.*

3. The most elevated portion of the Yomali chain appears to be that from whence these southern branches radiate, where the Oakkan and Thounzai Choungs derive their source, falling into the Hlaine Rivers on the West, and the Zanayee and Phoungyee Rivers, on the East and South. This part of the chain I should estimate at about 2,000 feet above the sea, presenting steep and inaccessible declivities. The rocks of which the country is composed are laterite, slate clay, and bituminous, often dark argillaceous sand-stone, which last in the higher ridge is hard and indurated, assuming a basaltic character with a concentric form of disintegration, but in lower places it is soft and friable, varying in colour from bluish to yellowish-grey, the whole being stratified and often presenting fossiliferous remains in the strata seams.

4. The laterite is an overlying unstratified non-fossiliferous deposit of uncertain depth or thickness resting on the slate clay and sand-stones, filling up depressions and folding round the base of the higher hills, forming an undulating dry hilly tract of country from ten to thirty miles in breadth, extending round the foot of the mountains and always covered with tree jungle.

5. The lower lands extending along the course of the creeks and rivers, consist of rich plains and valleys composed of river deposits resting on laterite. It is here alone that water is procurable in the dry season and where the chief population of the country are assembled. The water is obtained from wells penetrating down through the alluvial deposits to the laterite, and is generally of a whitish colour, derived from the fine soluble white clay of which the upper bed of laterite chiefly consists, but is, notwithstanding the colour, quite wholesome.

6. The elevation of the mountains in Pegu, no doubt, is less than it appears, owing to the great depth of the valleys as proved by the fact that the tides extend as far up the Phoungyee River in the rains, as

* These are the Shan Mountains on the East of the Sitang, and do not belong to the Yomah Mountains of Pegu.

Wah village near the foot of the hills; and in the dry season, the bed of the stream for twenty miles above the point where the tides reach, is found to have more water in it at the full and new moon than at other times. The Hlaine* is an elongated valley, extending North and South with the Yomah range, at a distance of ten to thirty miles from its East bank; the hills at intervals advancing and then receding from the river, but always leaving a broad plain on its bank. The lower part of the plain has been cultivated: the higher parts are covered with forest. The Phoungyee Valley, which lies to the eastward of Hlaine, from which it is separated by a branch of the Yomah, is an amphitheatre, open to the South and surrounded on all other sides by hills. Its breadth from East to West is probably about ten or fifteen miles, and its length from North to South thirty. The Pegu or Zamayee valley lies to the East of Phoungyee, from which it is separated by another branch of the Yomah. This valley is enclosed on all sides by hills; it is about forty or fifty miles in length from S. S. E. to N. N. W., which is the direction in which it lies, and twenty miles in breadth from E. to W. The Zamayee River is large and navigable for small craft in the rains, for a distance of sixty or eighty miles above Pegu, to the extremity of the valley; and although only about knee-deep in the dry season, it rises forty feet in the rains: its bed is sandy and unimpeded by rocks. The mountains extending along the N. W. side of the valley, separating it from Phoungyee, the Hlaine and Tharawaddy, are of considerable extent and elevation and form a part of the Yomah range. On the East side it is separated from the plains of Tounghoo and Shoay Gyeen by a lower branch of the same chain, and finally it is enclosed to the South by a low hilly tract through which the river passes by a series of small defiles to Pegu.

In our late tour we ascended the Thounzai Valley in the Hlaine District to its head, and descended through the Oakkan Valley, and having traversed the forests from thence to Mazalee, ascended the Choung of that name and thus crossed the boundary ridge from the Hlaine into the Phoungyee Forests, which having explored on both sides of the valley we crossed the second boundary ridge from Phoungyee, and descended into the valley of the Zamayee River, from whence we ascended

* The Hlaine forms a part of the Valley of the Irrawaddy with which the Hlaine River is connected by means of creeks.

the third boundary range which separates the Zamayee or Pegu Valley, from the plains of Shoay Gyeen or Sitang, and explored the Forests on both sides of the Zamayee River. The chief seat of population appears, as might be expected, to be confined to the banks of the main streams in these districts, where a broad expanse of good rice-land occurs. In the Hlaine District, although disturbed by small dacoits, chiefly cattle-stealers, the villages are all occupied. But in the Phoungyee Valley many are more or less deserted, but none entirely so, as I observed to be the case in the Pegu or Zamayee Valley. At a rough estimate, I should suppose, the population of the Hlaine Valley at present to be about 10,000, of Phoungyee 5,000, and the Pegu or Zamayee Valley almost equal in extent to Upper Assam. I should say the present population does not exceed 1,000, though I do not think at any time it exceeded 7 or 8,000 the utmost.

7. In the hilly or higher lands, always covered with Forests, the few villages met with are invariably situated on the banks of Choungs, where, in the dry season, a scanty supply of water is alone procurable from small trickling streams, or from pools or wells in their dry beds.

8. During the dry season, wheeled carriages may go in any direction to the foot of the mountains, the only obstacle being the occasional steep banks of the Choungs. No made or bridged-roads exist in any part of the country. Even the road from Rangoon to Ava, which we pursued as far as Thounzai, is nothing more than a track by which carts may pass, subject to the obstruction of Choungs already alluded to; and all traffic by this road having been suspended since the commencement of the war, it is frequently lost amidst the rapid growth of vegetation.

9. There is excellent material, however, all the way in the laterite, over which the line extends for the construction of a good road, but the expense of clearing the Forest for the purpose would be considerable, and as it would run parallel almost the whole way to the Hlaine Creek, navigable for six months in the year, the road could only be of partial use.

10. Timber for ordinary purposes is most plentiful throughout all parts of the Forests. The following are the trees which may be had of any size and to any extent:—*Sapindus acuminata*, *Odina woodia*, *Dillenia angusta*, *D. scabia*, *Blackwellia spirale*, *B. perpinqua*, *Clusia amona*,

Bombax pentandra, *Connarus* sp. *Nauclea parviflora*, *N. cordifolia*, *N. undulata*, *N. cadamba*, *Uvaria ventricosa*, *Bignonia spothodia*, *B. coronaria*, *B. adenophylla*, *Sterculia alata*, *S. ornata*, *S. ramosa*, *S. fatida*, *S. balanga*, *S. guttata*, *Ricinus dicoca*, *Artocarpus incida*, *A. liquosa*, *Terminalia bellerica*, *T. Seevola*, *Hibiscus macrophylla*, *Grewia floribunda*, *Ficus macrophylla*, *F. lanceolaria*, *F. congesta*, *F. glomerata*, *F. cordifolia*, *F. nitada*, *F. usophylla*, *F. pilefera*, *F. bifasia*, *F. mamillaria*, *F. oppositifolia*, *Kydia calycina*, *Eliodendron*, Sp. *Celtis tetranthera*, *Trewia nudiflora*, *Strichnos nux-vomica*, *Garcinia Cowa*, *Dipterocarpus turbinatus*, *D. alatus*, *Walsura pisidia*, *Waltheria velutina*, *Macroclina spectabilis*, *Sandericum indicum*.

11. The most valuable kinds of timber here found in abundance, next to Teak, are *Pentaptera glabra*, and *P. arjuna*, which present clean trunks of six to eight feet in diameter, and fifty to eighty feet high without a branch, would afford excellent mast-pieces and spars for naval purposes, and might be tried for gun-carriages.

Diospyros melanoxydon, or Ebony occurs plentifully, from fifteen to eighteen inches in diameter and fifty to seventy feet in length. Might also afford spars for naval purposes. Three species nearly allied to Sissoo, so valuable for gun-carriages are very common, namely, *Dalbergia robusta*, *D. frondosa*, and a third undescribed species common at Yondike, the name of the place being derived from that of the tree. These trees attain a girth of four feet and upwards, and are taller and straighter than the Sissoo.

Lagerstræmia, Pynnah, next to Teak, is in greater request than any other description of timber, as it is not injured by white-ants. The Burmese gun-carriages are made of this wood : its fault is its liability to shakes. It is not, as supposed, *Lagerstræmia reginæ*, but a different species. *Acacia*, four species, remarkable for the strength and durability of their wood, namely, *Acacia sundra*, *A. stipulata*, *A. alata*, *A. serissa* and *A. Smithiana*, also *Cassia sumatrana*, which affords a very strong wood, like ebony, and is very plentiful, especially on the Mazalee Choung, the name of which is derived from this tree. *Inga xylocarpa*, or iron wood, is a plentiful large tree, fifteen to eighteen inches in diameter, very lofty and straight, would afford excellent spars for naval purposes, if not too heavy. *Eugenia nervosa*, *E. pulchella*, *E. myrtifolia*, and *E. jumbosa*, affording dark strong wood ; to which must be added *Melicocca*

trijuga, a large tree every where procurable, affording a strong tough wood, of which the Burmese make their excellent solid cart-wheels; *Carallia lucida*, a plentiful tree, of large girth, and which in Calcutta is employed in house-building under the name of *Keerpa*, *Castanea*, an Indian oak, a large and very common tree, together with *Conocarpus acuminata*, a large, very valuable and plentiful timber throughout the Forests. The only one of all these valuable kinds of timber that appears to be coming into any thing like general use is *Pymmah*, upon which I would propose a duty of one Rupee a log. Teak occurs in the outer Forest growing on laterite soil along with the foregoing trees, but whether from the facilities afforded for its removal or other causes, it is of small size compared with the dimensions it attains in the hills. In some places it assumes, from the number collected together, the character of Teak Forests, but every tree on attaining a marketable size is removed. Steps have been taken to prevent this as far as possible, and in the course of a few years, it will be seen (if the instructions given are attended to,) whether these lower Forests are really capable of yielding large Teak or not.

The following trees, which are abundant in the upper parts of the country about Prome, are absent as forest trees in lower parts of the Province, namely, *Pterocarpus dalbergioides*, (*padouk*,) *Shorea robusta*, (*saul*,) *Tamarindus indica*, *Ulmus integrifolius*, *Acacia catechu*, and *Cæsalpinia Sappan*, *Hopea* and *Melanorrhæa* are likewise absent in these Forests. Other kinds are peculiar to the low Forests on the salt water creeks, as *Sonerilla*, *Soneratia apetala*, and perhaps *Heritiera*, said to have been seen there.

12. It is in the hill Forests alone, that Teak appears in perfection. It is only found on the southern and western declivities where it is exposed to a strong sun. On the open and exposed ridges, it becomes scarce, and it disappears altogether on the northern sides of hills. It is this peculiar partiality it exhibits for the southern and western slopes that renders the distribution of Teak so partial and limited. Its immediate associates in the forests are *Spondia acuminata*, *Swietenia chaplas*, *Inga xylocarpa*, *Dalbergia robusta*, and *D. emarginata*, *Blackwellia propinqua* and *B. spirale*, *Pentaptera arjuna*, and *P. glabra*, *Sterculia alata*, *Careya arborea*, *Terminalia seevola*, *T. bellerica*, *Phyllanthus*, *Clusia spinosa*, *Conocarpus acuminata*. All large timber rivalling the Teak itself in magnitude and far outnumbering it in quantity. The soil of the Teak Forests presents

the same uniformity as the geological structure. In the hill Forests where the best Teak is found, the soil is a grey stiff sandy clay, derived from the dark slaty sand-stone and slate clay, the particles passing downwards into comminuted slaty rhomboidal fragments.

13. In the lower Forests where the soil is composed of laterite, Teak is not found in the same perfection ; whether the difference be owing to the soil, or to the want of shelter and radiated heat from the immediate vicinity of hills, I cannot pretend to say, but nearly all the other varieties of timber associated with Teak partake of the same peculiarity and attain a much larger size in the hills than they do in the lower Forests.

14. Teak is diffused throughout the general Forest in the proportion of about one to five hundred of other trees. In what are called the Teak Forests, strictly speaking, it is found in the proportion of about one to three hundred not equally diffused, but confined to certain localities of small extent where it constitutes the prevailing tree for a few hundred yards, seldom for a mile continuously. These localities are, as I have said, the warm southern or western slopes ; sometimes it ascends to ridges, and when these are sheltered to the North and East by higher hills presenting a free South-western aspect, the Teak assumes its largest and most lofty size. It must be quite obvious, however, that a tree depending on so many local peculiarities for its full development, cannot occur continuously to any great or general extent, yet the quantity of Teak in these Forests has been, and still is, very great, although the lower Forests have been heavily worked ; and the best Teak is now only to be had high up in the Forests from whence its removal will every year be attended with increased difficulty. This observation applies more particularly to the Thounzai and Oakkan, although it is more or less applicable to all the other Forests. Still from the canal-like character of the Choungs and the absence of any very formidable rocky impediments, the facilities they afford, for floating timber in the rainy season is very great, even from their extreme sources. But even in these remote places the resources of the Forest in full grown timber are limited, and in the Phoungyee Forest almost quite exhausted.

15. In all cases where the Teak has not been entirely cleared away, a copious crop of young trees are rapidly advancing in all stages of growth, to the present cutting standard of two to four feet girth, and only require to be preserved until they acquire their full natural growth, in order to

afford a plentiful supply of valuable timber at a future period ; but it will require no ordinary precaution to render the full-grown timber sufficient to meet the public demands, until the half-grown attains its full size, and yet the security and value of the Forests will entirely depend on the success with which this principle is carried out .

16. There are few inhabitants in the Teak Forests, certainly not above two or three to twenty square miles, and strange to say, they are quite indifferent to the timber question, and do not even employ teak in the construction of their houses, which are made entirely of bamboos, covered with the broad leaves of *Licuala*, even their occupations are altogether unconnected with an article which is the source of wealth and industry every where, but in the place where it is produced.

They are of two classes, Kareens and Yaibanés. The Kareens cultivate small patches of the Forest, and after taking two or three crops from the same soil, shift their habitation to another locality.

17. The Yaibanés are manufacturers of silk, who cultivate mulberry (*Morus Indicus*) for feeding silk-worms which they rear, the hills being better adapted for the growth of the plant than the plains, besides which their plantations are not exposed to the trespass of cattle. The silk they produce appears to be of a coarse kind, owing to the imperfect way in which it is wound off, than to any fault of the cocoon. They are a most industrious people, young and old of both sexes being employed without interruption, in some part of the process, which seems to require incessant attention. The cocoons seemed to be large and very fine, and were produced at the rate of 2,000 for one Rupee, and the silk when wound off is valued at Rupees 5 per viss. They could give us no information about the Teak Forests, though living in the midst of them. A few men come up from the plains at certain seasons to cut and remove timber, but beyond this they knew nothing, and seemed to care still less about the matter. The Yaibanés are however a very happy and prosperous race, with the reputation of being possessed of considerable hidden wealth, which for security they bury in the Forest.

18. The only class of Natives who are interested in the timber question are a few of the principal people in large towns, as Thounzai, Oakkan, Phoungyee and Pegu, who receive advances for timber from residents in Rangoon, or their agents, and depute men to the Forests with buffaloes to bring it down. The business can scarcely be said to

form any part of the regular industry or trade of the country, inasmuch as the parties engaged to bring down timber are land-owners and farmers, who are only tempted by the tender of large sums of money to enter into engagements at variance with their more legitimate business—the cultivation of land,

19. In a thinly-peopled province like Pegu, any thing that draws the attention of the inhabitants away from the cultivation of the soil must be injurious. The advance of large sums of money for the purpose of bringing down timber has this effect—it makes the landlord independent of his duty and the labourer independent of agriculture, by enabling him to obtain as much during a few weeks' light frolicsome employment, cutting timber in the Forests, as would maintain him the rest of the year in idleness. I offer these observations to show, that in Pegu there is no such class as foresters or professional wood-cutters, that is, persons who have been accustomed to earn their bread by forest-work, or who can be thrown out of accustomed employment or be in any way injuriously effected by any alteration in Forest laws or rules.

20. The Thounzai Forests contain 1,532 killed and felled trees, of which 1,100 are under-sized, being of an average Thounzai Forests. girth of four feet six inches, and the remainder six feet and upwards. These Forests were at one period of great extent, and the timber they produced was held in high estimation. They have been much over-worked, but some valuable portions of the Forests still remain in their original state, more particularly on the higher tributaries, capable of affording for several years in succession a supply of some two or three hundred logs of first-class timber per annum, but not more, nor could we hope to keep up a supply even to this extent from the Thounzai Forest for any very lengthened period. It may however be hoped, that the growing under-sized trees will, in the course of a few years, begin to assist the supply of first-class timber, which of course will depend on the present practice of felling under-sized trees being effectually stopped. Of 4,691 trees standing within the space of one mile of water carriage on the several streams, 2,157 were under-sized, being from four feet six inches in girth to five feet six inches; 1,219 were from six to eight feet; 944 from eight to ten feet, and 371 from ten to thirteen feet six inches. Of 625 trees above nine feet in girth, only 24 were killed and 26 felled being a proportion of eight per cent., while on the other hand of 3,144

trees under six feet, and of an average girth of four feet six inches, 253 were killed and 734 felled and ready for removal, being a proportion of 28 per cent, thus showing the tendency of the trade at present to the removal of small timber on the preservation of which the value and resources of the Forests must necessarily in a great measure depend.

21. The Oakkan Forests.—The general level of this valley is lower than that of Thounzai and either from this cause or the Forests being more worked, the timber generally does not run so large as that of Thounzai. The Returns from this Forest, drawn up with every care, show the average girth of the largest timber to be seven feet six inches. Of 8,030 trees standing within one mile of water carriage in this Forest, 1,130 are seven feet six inches, 1,850 six feet, and 5,050 are of an average girth of four feet six inches. It contains within half a mile of water carriage 2,019 logs of seasoned timber, of which 661 are from six to nine feet in girth, and 18 from nine to eighteen feet, and 1,340 of an average girth of four feet six inches, here showing the same proportion in favor of the removal of small under-sized timber in preference to large, as in the Thounzai Forest.

22. Magayee Forests.—Of 5,350 trees standing within one mile of this Choung or its branches, 150 are nine feet and upwards in girth, 700 are seven feet six inches, 1,100 six feet, and 3,400 are under-sized trees of an average girth of four feet six inches. This Forest contains 430 killed and 656 of felled timber, in all 1,086 logs of seasoned timber, embracing 464 logs of six feet girth.

23. Mazalee Forests.—In this Forest there are 3,800 within one mile of the Mazalee Choung or its branches. Of these trees 300 are nine feet and upwards, 600 of seven feet six inches, 1,200 of six feet girth, and 1,700 under-sized trees of four feet six inches girth. This Forest contains 555 logs of seasoned timber, 405 being six feet, and 100 under-sized logs of four feet six inches in girth.

24. Thus the Hlaine Forests contain 5,287 logs of seasoned timber, of which 2,111 are six feet and upwards in girth, the rest being under-sized, and 21,871 green trees, of which 8,564 are six feet and upwards in girth, the whole being included within the range one mile of one or other of the numerous Choungs by which the country is traversed.

It is not to be inferred from this that, by going further, or extending the range of land carriage, additional Teak Forests may be reached in the same ratio. On the contrary, the whole of the Forests are embraced within a net-work of Choung, so that it is impossible to pass more than a mile or two from one Choung without coming into the range of another ; besides which, the Forests yielding Teak are few and far between, as compared with the general range of country over which they are dispersed, we must therefore look for future supplies rather to the preservation of under-sized trees than the hope of finding other more extensive Forests beyond the limits of those already worked in the Hlaine District.

25. The Phoungyee Forests are situated on both sides of the valley drained by the Choung of the same name : they have all been excessively worked, so much so, that in some of them there are now no full-grown trees ; they are composed chiefly of yattheets or under-sized timber, which hereafter may afford a large annual supply of first class timber, provided they are in the meantime carefully preserved. The Forests on the N. W. extremity of the valley occupy the flanks of the Yomah Hills, are nine in number, and have now remaining in them but 199 full-sized trees, but as forty of these present an average girth of twelve feet six inches, and ten a girth of fifteen feet each, there is no reason to doubt their capability of producing first class timber if it be only allowed to stand until it attains its full growth. They contain 1,063 logs of seasoned timber, of which 232 are felled, 788 killed, and 43 natthul or dead trees. Of the felled timber 72 logs are from six to nine feet in girth. Of the natthul or dead trees, 14 are six and a half feet, 1 of eight feet, and 4 of ten feet girth. Of the killed trees 119 are of an average girth of ten feet, 216 from six to nine feet, and the remaining 453 are from four feet six inches, to two feet six inches in girth.

26. The Forests on the S. E. side of the valley are very extensive, although they are but two in number, namely, the Muhooya and Tshogyee. They have been worked to excess, so that there now remain but 948 full-grown trees, and but 506 of four feet six to five feet six ; but the quantity of young timber which is here rapidly springing up and advancing to maturity, is very great, and if rigidly preserved, may, in twenty years, begin to afford a considerable annual supply of valuable timber. They contain 917 logs of seasoned timber, of which 403 are natthul or dead

trees, that have died from natural cause, and 240 are killed, and 74 felled trees. Of this seasoned timber, 79 logs measure eight feet in girth, 377 logs six to eight feet, the remaining 461 being undersized timber from five feet six to four feet six in girth.

27. The Pegu Forests are situated on both sides of the Zamayee River, commonly called the Pegu Choung, and although they are in reality only two great Forests, separated by the Zamayee or Pegu Valley, about twenty miles in breadth, yet they are sub-divided by no less than twenty-three tributary streams falling from the mountains on either side into the main stream, each bearing a distinct name which is bestowed also upon that portion of the Forest which it intersects. On the West side of the valley, the Teak Forest is continuous with that of the Mahooya on the Phoungyee side of the boundary ridge of mountains, and contains within a distance of two miles of the several Choungs, 15,495 trees, of which 10,130 are under-sized, being four feet six inches in girth to five feet, 4,305 of six feet girth, 2,060 of seven feet and upwards. Of the above 2,895 are killed. Of the killed trees 210 are seven feet six inches and upwards, 835 six to seven feet, and 1,850 under-sized trees (yatheets) below five feet. The felled timber in these Forests has been all removed, together with some of the killed trees, fresh cutting in some of the Forests having been observed to a considerable extent.

28. On the East side of the valley, the Forest contains within two miles of the several Choungs, 20,105 trees, of which 1,785 are seven feet six inches and upwards in girth, 3,630 six to seven feet, and 10,070 under-sized trees (yatheets) from four to three feet in girth. Of the above 2,900 are killed and seasoned, 300 being seven feet six inches and upwards, 810 six to seven feet, and 1,790 yatheets or under-sized timbers, four feet six inches to three feet girth. In these two Forests on the Zamayee where there is a choice of timber within a mean distance of ten miles from the principal streams, of 5,795 killed trees, 3,640 of an average girth of four feet six inches have been selected for the market, being seventy-three per cent. of under-sized trees in preference to timber of full growth and dimensions.

29. In Moulmein, the Forests were thrown open to holders of licences to fell timber under stated rules, when it was found, in the course of a few years, that they were

Forest Rules.

worked with great improvidence and that the licencees afforded no security for the conduct of holders, as they were transferred from hand to hand. It was then proposed that the transfer of permit should be registered so as to render the holders liable to penal enactments for the violation of Forest rules. But still the Forests were worked with a view to immediate gain without reference to future supplies. Modifications of the rules were proposed to meet abuses which arose from time to time, which, in their turn, were either evaded or rendered inoperative; and holders of laturhats, originally revocable at will, now claimed proprietary rights on the sanction of time and capital invested, which the Government felt unwilling to refuse, more especially as the duty levied on timber in Moulmein had been regarded in the light of a "rent" for the privilege of working certain Forest tracts. It was then proposed to transfer the permits or licencees into leases, which it was alleged would give the holders a permanent interest in the Forests and induce them to maintain a succession of timber by means of planting. The Forests are still worked with a view only to the immediate gain of the farmer, almost in some cases to destruction; while all rules intended for their preservation and renovation were either evaded or proved unsuccessful until 1848, when two successful conservative principles in Forest management appear to have obtained the sanction of Government, and upon which the system it is proposed to follow with regard to the Pegu Forests, is based.

1st. An uniform duty on all logs, whether large or small, which it was alleged would discourage the felling of under-sized trees.

2nd. The retention of portion of the Forests in the hands of Government, private parties being permitted to fell such trees only as are pointed out to them by persons in the Forest Department. The details relative to the application of this plan to the Forests of Pegu have been given in my letter, No. 37, dated the 29th October 1853, when proposing the necessary establishment.

30. With regard to the first of these proposals, it will be observed, that Mr. Maingay, in reply to a letter of Government, dated 6th July 1827, remarked, that a "general equal duty upon each tree cut would be a good mode of preventing the smaller and less valuable timber from being cut down; and that a regulation, confiscating all timber cut under specified dimensions, would tend to preserve young trees. This suggestion, though afterwards incorporated in the various forms of Rules proposed from time

to time, was systematically evaded or rendered inoperative until 1848, when, at the recommendation of a Committee, the rate of duty "per log" in lieu of the old duty "per ton" was fixed at four rupees on timber brought down the Attaram, and two rupees twelve annas per log upon that brought from other sources.

The distinction appears to have been made on the grounds that timber brought from other sources than the Attaram would be liable to other charges in the Shan and Burman States. But even then the question was so far compromised as to render five per cent. of under-sized timber admissible under the head of Branches and natural Dwarf Timber.

31. With regard to the second of these propositions, namely, the retention of the Forests in the hands of Government, private parties being permitted to remove such trees only as are pointed out. The higher Teak Forests are only accessible by means of ravines which ramify and penetrate through the hills in every direction, rendering the country most difficult to traverse. To this cause the celebrity of these Forests for the production of Teak is most unquestionably due, for without that complete and general intersection of the Forests in every direction by means of Choungs, the value of the timber, which is widely diffused and scattered through them, would be of little importance from the difficulty with which its removal would be attended. Certain it is, that there is scarcely a square-mile from the western verge of the Forests on the Hkaine to the eastern declivities towards the Sitang that is not intersected by Choungs down which timber may be conveyed in the rains. This observation is of vital importance in showing that no degree of local vigilance or superintendence, no extent of local establishment confined to the interior of the Forests would be sufficient to protect them from extensive injury on every side or secure a proper or profitable administration of their resources without the aid of a well-devised timber revenue system as a part of the general administration of the province. If such a system were to be dispensed with, and with a view to free-trade in timber, the duties of the Forest Assistant were to be confined to the Forests where the trees were to be killed, marked, and sold at certain rates including duty, and the buyers allowed to remove them without further scrutiny or interruption in transit to Rangoon. Such are the intricacies of the Choungs and the facilities for removing timber, that the local establishment in the Forests would be of very little use in preventing timber from coming into

market that had never been purchased at all ; and a premium would thus be held out for abuses which the Superintendent of Forests could not control and which would soon end in the destruction of the Forests.

32. Thus supposing the Forests were habitable, that assistants could live in them throughout a considerable portion of the year, it is obvious, that a Resident Forest Establishment could not exercise control sufficient for their protection and proper administration ; but when I state that they are not habitable for more than a few months, and it is known that they are uninhabited tracts adapted by nature for the shelter only of elephants and other wild animals with which they abound, the location there of a permanent establishment sufficient for the care and disposal of Teak timber will appear to be quite out of the question.

Lastly, there is this objection to the principle of selling trees in the Forest at rates exempting the timber from all revenue duty, namely, that the purchasers under the head of Branches (to which they would become entitled) might then introduce under-sized timber to any extent they pleased without restraint or tax. On the other hand, the principle may be so far acted upon, that killed trees may be sold at a nominal upset price subject to an uniform scale of duty to be levied outside, as at present, but under a better arranged tariff ; and as competition for the purchase of killed trees improves, the upset price may be increased, but at first it should be merely nominal, and the tender somewhat of the nature of a permit.

33. A Forest may be regarded a growing capital, the resources of which are the young trees, and unless these are preserved and guarded, with all the precautions essential to secure their natural growth and advancement to full maturity, it is obvious the Forest must necessarily degenerate from the nature of an improving capital, to that of a sinking fund, which, within a given time, must become expended. The loss occasioned by the removal of an under-sized tree is not merely the difference of value as compared with a full-grown tree as a piece of timber but must be estimated by the number of years the Forest may be deprived, by its removal, of the annual distribution of its seed, which period will vary according to the stage of growth at which it was cut down, and the time it would otherwise have taken to arrive at maturity.

34. It is shown, para. 28, that of the number of killed trees in the ayee or Pegu Forests, seventy-three per cent. are under-sized, selected

for killing in preference to full-grown timber. The several notices of the other Forests as well as the returns of timber passed at Rangoon from the 15th of June last to the present time, all show that the present traffic in timber is confined chiefly to half-grown wood.

The only remedy for a practice so fatal and destructive to the Forests of Pegu, would be a penal enactment passed under the authority of the Legislative Council against the felling of Teak timber below five feet girth except for naval purposes specified in Table No. 1, rendering the holders of such timber liable to fine or imprisonment. In urging the importance of prompt and decided measures on this point, I would refer to para. 30 of this Report which shows that in Moulmein, a period of twenty-one years elapsed from the time the restrictions on felling under-sized trees were proposed by the Commissioner, until it was finally settled. In the mean time the Forests of the Tenasserim Provinces were worked to exhaustion, a result which the timely adoption of Mr. Maingay's suggestion in 1827, and the conferring on it the force of law would have prevented, and even in the end, when finally settled in 1848, the principle of the measure was to a certain extent compromised by the admission of five per cent. of under-sized timber. The subject of planting has been fully treated and discussed in the papers on Teak Forests as if it might be made the means of renovating extensive Forests that have been once exhausted. But if we fail in the comparatively simple duty of preserving the old Forests, we can scarcely hope to succeed in the more difficult task of creating new ones. Planting as a means of extension when carried on in connection with thriving Forests, might indeed become a duty, with a view of perpetuating an object that conferred a lasting benefit on society.

35. The annexed Return No. 2 of timber passed during the current season at Rangoon, shows that of 11,553 logs, being the total number passed up to the 1st instant, 7,082 or 70 per cent. of the whole were yatheets, small timber, under four feet six inches in girth, upon which a duty of 22 rupees 8 annas per 100 has been levied, being 15 per cent. on a valuation of 150 rupees per 100, or rupees 1-4 each. It will be necessary for the interest of the public revenue as well as for the preservation of the Forests that this description of timber should be no longer admitted.

The same Return shows that 1,727 loozars or short logs from sixteen feet in length to ten feet, and of any girth from four feet six inches

upwards, have been passed during the same period, yielding a revenue of Company's Rupees 1,168-8-8, being, as in the case of yathects, fifteen per cent. on the valuation.

It would be necessary that a description of timber, attended with so much waste in consequence of its short length should be no longer recognized; and although it is not necessary for the protection of the Forests, that the introduction of such timber to the market should be actually prohibited provided it be of the required girth, yet it should be liable at least to the same duty as logs of full length.

36. It will be seen from the Return of timber passed during the current season that yathects and loozars constituted together eighty-five per cent. of all the timber passed.

In lieu of them I would propose that the only description of timber to be recognised in future should be logs of six feet girth and upwards, of a length corresponding to what are called doogies, *i. e.*, 25 to 32 feet, thus yielding as the minimum 17-25 tons of timber; taking the market value at Company's Rupees 40 per ton making the value of the log Company's Rupees 51-3-0, upon which at the rate of fifteen per cent. the duty chargeable on each log, would be Company's Rupees 7-10-5. This scale is based strictly on the principles of the existing tariff, namely fifteen per cent. on the value, but the value of choice timber is adopted in place of that of a half-grown inferior article, such as constitutes the present staple, and if the change should be attended with an interruption of the trade in the first instance it would be highly beneficial to it hereafter. The annexed Table No. 3 exhibits the various descriptions of timber I would propose to recognize and the scale of duty to be levied on each class.

37. Information would be open in the office of the Forest Department exhibiting the nature and extent of killed and seasoned timber available in each Forest, for the purchase of which sealed tenders might be invited at a nominal upset price exclusive of duty.

The holders of tenders should be entitled to no privileges over other parties beyond the mere permission to remove a given number of killed trees in certain Forests, subject to all the penalties and liabilities of other parties for the description of timber they may fell or bring away, notwithstanding the same may have been killed under orders of the Forest Department, and pointed out to them as within their tender. The object

of this is to render the responsibility of all parties, whether in local charge of the Forest or acting under contract for the removal of timber, undivided; the party killing an under-sized tree and the party felling it being equally amenable to the law, whether a public servant or a private agent. Timber of the authorized description may be admitted from other sources than the Forests worked under tender, subject to the same restrictions and duty, provided a pass be obtained for its removal, such pass not being understood to sanction any exemption or right beyond the mere privilege of transit.

It should be open to the Superintendent of the Forests to declare what Forests shall from time to time be worked alone by holders of tenders, it being understood that all Forests shall be so worked as soon as the requisite information regarding them can be obtained. In the mean time no injury can accrue to any of the Forests, under the law proposed for the protection of under-sized trees. The timber revenue stations should be placed as at present within a convenient distance of Rangoon or near Kemendine and the mouths of the Pegu River and Paizoondome Creek.

38. With respect to timber converted for house-building and other purposes in large towns in the interior above the stations, an application will be made to the Deputy or Assistant Commissioner of the district, by the party stating the probable quantity required and reporting the same to the Forest Assistant, who would take care to levy the proper duty, and also to confiscate any under-sized timber that might be smuggled in the interior, prior to the introduction of the new tariff. A Notification, somewhat to the following effect, should be published :

It having become necessary to modify the existing duty levied on Teak timber, all parties having claims on timber now lying on the banks of the principal rivers throughout the Province, either to remove, point out to, or register the same in the presence, and with the aid of some one of the Forest Assistants and Goungs noted in the margin, and file the said register in the office of the Superintendent of the Forests within one month from this date for the Hlaine, Phoungyee and Pegu Rivers. Forty days from this date for the Tharrawaddy River (*i. e.* the Hlaine above Thounzai) and fifty days from this date respectively for timber lying on the Irrawaddy and Sitang. After the above dates, no registration of claims can be received, and all timber, not registered within the periods above specified, will be liable to the new rates which

will then come into operation. The Government cannot by this registration hold itself in any way responsible for the safe custody of property so registered, these measures being adopted merely for the relief of timber now lying on the rivers from the operation of rules not in force at the time it was cut.

39. With respect to killed timber standing, and felled timber now lying in the Forests, the particulars of which are exhibited in Table No. 4, it appears to have been understood from the first that killed trees are a part and parcel of Forest property, and that the mere circumstance of having killed a tree under sanction of the late Burman Government is not considered sufficient to establish a right to it which should be in any way binding upon our Government to acknowledge. I do not see why the act of felling should convey a right, which is denied to the act of killing. Felled timber found lying in the Forests may thus, I think, unquestionably be regarded as public property. I would therefore propose that the killed natthul, and felled timber exhibited in Table No. 4 be advertized and sold at upset prices, corresponding with the average rates realized at auction sales at Rangoon for corresponding classes of timber during the past season.

40. The sale of the seasoned timber in the southern Forests as above proposed, will alone supply the Rangoon market during the approaching season with 13,067 logs, exclusive of the timber which will be brought in from other sources in the district, while it may be hoped that the seasoned timber contained in the middle and northern Forests will, when these Forests shall have been examined, be found in like manner sufficient to meet the demand for 1855, after which period supplies must depend on the arrangements entered into in the mean time under the new rules.

As full grown timber requires to be killed at least two years before it is cut down, I took the precaution, as early as November last, to have 800 full-sized trees killed in Thounzai Forests, and 600 in the Oakkan Forests. It will be necessary, without loss of time, to extend these provisions as far as the resources of the Forests will safely allow, without injury to their future condition, in order to meet the demands for 1856. The provision for succeeding years will require to be made in like manner at least two, or what would be still better three years before it is required; and the value and resources of the Forests will depend in no slight degree upon the care with which these annual supplies are from year to year

provided and which will demand a thorough and familiar knowledge on the part of the Superintendent of the resources and condition of every portion of the Forests throughout the Province, only to be acquired from personal observation and inquiry.

41. In conclusion, I cannot but remark, as an unfortunate circumstance, that Teak timber should appear to form almost the only object of mercantile enterprize in this Province. Since the encouragement of an exclusive search to Teak timber alone, while it endangers the destruction or complete annihilation of the species, causes other descriptions of timber to be entirely overlooked, which, if they were equally well known, might be found to be scarcely less valuable. Time and necessity will in due course render these and other resources of the Forests better known as the oils, gums, and sextile materials; the wood-oil has already obtained a reputation which ought to obtain for it a considerable demand.

The seed of *Buchanania latifolia* affords a valuable oil and *Odina wodia*, *Xanthochymus ovalifolius* and *Randia latifolium*, valuable gums, while *Urena lobata*, a weed of universal prevalence met with at every step, grows spontaneously to a height of four feet, is said by Mr. Mason to afford a valuable hemp, while a coarser cordage in general use is afforded by the bark of *Sterculia ramosa*, *Bignonia coronaria*, and according to Mr. Mason's valuable work *Hibiscus macrophylla*.

But it is not to the Forests alone that the resources of the Province are confined. Its agricultural capabilities only require sufficient population to render them equal to Bengal itself as a rice country, while the higher lands will afford rich pasture for cattle.

The great rise in the price of cattle during the short time that has elapsed since the Province passed under British rule, has already had the effect of turning the attention of the people to the importance of cattle-farming, and as soon as the present practice of cattle-stealing can be sufficiently suppressed by the strong arm of the law, this branch of industry, so congenial to Burman habits, will be the first to produce a great social change in the condition of the people.

(Signed) J. McCLELLAND,

Offg. ~~Supt.~~ ^{Supl.} of Forests, Pegu

PROME,
5th April 1854. }

P. S.—Papers are enclosed with the Report Sketch Map of the Southern Teak Forests of Pegu. The position of the principal places were fixed from Captain Pemberton's large map of the South-east Frontier, and the details filled up from personal observation, and inquiries of myself and Assistants.

I have since learned from Lieutenant Williams, Bengal Engineers, now engaged in conducting a topographical survey of the Province, that Pegu is placed considerably too far to the West; this of course will materially alter some of the details of this sketch.

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

TABLE NO. II.

GENERAL STATEMENT of the classes of Timber passed at Rangoon, during the Season of 1853-54, and the amount of Duty realized.

Names of Places.	Loozats.		Doogres.		Mast-pieces.		Keel-pieces.		Yard-pieces.		Shin-beams.		Shindoos.		Shin-shays.		Vatheets.		Lend-planks.		Doodoes.		Crooks.		Scantlings.		Total.		Amount of Duty.		REMARKS.
Pegu,	598	17	9	0	43	17	10	0	2082	0	5	2	59	2842	Rs.	1322	10	8													
Oakkan,	138	16	0	0	2	3	3½	0	1508	0	73	215	181	2139½	As.	816	10	9													
Toung-hoo,	142	353	12	6	24	17	0	0	58	1	1	0	27	641		1183	1	0													
Rangoon,	2	6	0	0	4	1	0	0	5	0	0	0	70	88		28	7	2													
Tharavaddy,	278	231	5	6	28	253	119½	28	2589	3	84	252	526½	4404		2394	8	4													
Phoungyee,	560	2	0	0	1	0	0	1	840	0	6	10	2	1422		411	4	5													
Prome,	9	0	0	0	0	8	0	0	0	0	0	0	0	17		15	2	3													
	1727	625	26	12	102	299	134	29	7082	4	169	479	865½	11553½		6171	12	7													

PROME, }
5th April 1854.

(Signed) J. McCLELLAND,

Offg. Supdt. of Forests, Pegu.

TABLE No. III.

STATEMENT exhibiting the classes of Timber which it is proposed to recognize and the duty to be levied on each.

Description of Timber.	Prices.	Each or per foot	Length averaging.	Moulded or breadth, averaging.	Sided or thickness	Amount.		Tonnage.	Amount of Duty.	
						R.	A. P.		R.	A. P.
Teak, crooked, large,...	0 0 0	0	18 to 20,	1 6 to 1 4	1 1 to 1 3	0	0 0	0 31	5 2 11	2
Ditto ditto, middling, ...	0 0 0	0	15 " 20	1 3 " 1 2	0 10 " 1 0	0	0 0	0 18	2 1 9	8
Ditto ditto, 3rd sort, ...	0 0 0	0	14 " 20	1 2 " 1 1	0 7 " 0 9	0	0 0	0 12	4 0 14	6
Ditto ditto, boat timber, ...	4 8 0	each	0 " 0	0 0 " 0 0	0 0 " 0 0	4	8 0	0 0	0 0	9 8
Ditto Keel pieces, large, ...	0 0 0	0	50 " 60	1 8 " 2 0	0 0 " 0 0	0	0 0	3 34	10 16	8 11
Ditto ditto, small, ...	0 0 0	0	45 " 50	1 4 " 1 6	0 0 " 0 0	0	0 0	1 14	3 8	0
Ditto Mast pieces, large, at ...	8 8 0	per foot	65 " 80	1 10 " 1 6	0 0 " 0 0	0	6 16	4 0	0 0	92 6 5
Ditto ditto, middling, at ...	5 2 0	0	60 " 70	1 5 " 1 2	0 0 " 0 0	0	3 33	2 0	0 0	49 15 2
Ditto Mast, small or Spars, ...	75 0 0	each	40 " 50	0 9 " 1 4	0 0 " 0 0	0	7 5	0 0	0 0	11 4 0
Logs, ...	51 3 0	0	25 " 32	six feet girth, 0	0 0 " 0 0	0	5 1	3 0	1 14	0 7 10 5

PROME, }
5th April 1854.

(Signed) J. McCLELLAND,

Offy Supdt. of Forests, Pegu.

TABLE No. IV.

ABSTRACT of Inventories of seasoned Timber, in the Southern Forests of Pegu, taken during the Survey of 1854-55.

[illegible]

(Signed) J. McCLELLAND,
Offg. Supdt. of Forests, Pegu.

PROME,
5th April 1854. }

Report on the Lhine, Phoungyee, and Zamayee Teak Forests, by Robert Abreu, Head Assistant to the Officiating Superintendent of Forests, Pegu.

The Pegu Province was on the 20th December 1852, proclaimed and annexed to the British territories. It has been a principal mart for teak, and indeed it constituted the most important article of trade ever since the foundation of Rangoon by Alompran in the year 1775.

2. The Government desirous of being made acquainted with the resources and physical characteristics of the teak Forests, as well as to make those lying on the three streams (Lhine, Phoungyee and Zamayee,) available for this year, disembodying themselves into the Rangoon River, founded upon the actual examination of them. Dr. McClelland, the Officiating Superintendent of the Forests was therefore requested by the Commissioner of Pegu, and Governor General's Agent, in a letter No. 45, dated 30th November 1853, (indicating the principal points to which his attention was to be directed during the travelling season) to proceed into them. I had the pleasure of accompanying him in this tour.

3. In obedience to the said precept, we accordingly started to the Lhine Forests by land on the 2nd of January 1854, and reached on the 8th instant Yendikequin village, situated on the margin of the Teak localities. I shall here insert the following, extracted from my Journal, noted during our march of seven days.

2nd January 1854.—Left Rangoon at day-break for the Forests accompanied with thirteen men of M. N. I. and equal number of Pegu Battalion; the direction of our route due E. for couple of miles, which lay through a jungle of wood-oil trees, already tapped, and bamboos. Pursuing this direction, we found that the gradient route was a divergent one. In a course of quarter of a mile, we found that the road to Ko Khine village, consisting of forty houses, and having an interstice fertile open ground, partially cultivated with vegetables, diverged to N. E. Continuing in this direction, I observed a vast contrast from the village we just passed, with that of Kambet and Yaigoo, which presented to our view nothing but grass jungle, growing over a paddy land. A mile from this place we encamped at Zwayzone. The Phoungyee, whose Kyoung lies proximate to our place of encampment, was a very obliging religious man, supplying us with such necessaries as he could afford; in return I presented him with twenty-five cigars which were thankfully received.

3rd January.—Started at day-break. Our general route N. N. E. We passed by Thadajec village, containing 40 houses situated about a mile or a mile and-a-half from Zwayzone. Proceeding on the direction, the Creeks Thadajec and Thudogalay intersected our way, the former situated three quarters of a mile from the latter, when we went over the margin of a wide paddy plain for a mile, which is rapidly falling into a jungle. We met Captain Williams and his Assistants surveying in this place about 3 miles from their camp in Toun-nyo village which we passed; leaving this and travelling for three miles, we came to Anan-been, a village of thirty houses, and proceeded on, when after half a mile's journey, we came to a village abounding with mangoo trees,—the Natives have very appropriately given the appellation of Tharet-kone. The inhabitants of this place are apparently in indigent circumstances. They have not cultivated a single acre of land ever since the Province came into our hands. On inquiry, I find, that it is attributable to the loss of all their buffaloes, by disease, than their aversion to labor.

Toung-thoozoo (one and-a-half mile from this place, and containing twenty-five houses) on the contrary is in a rapid progressive state. I must certainly say the inhabitants are very industrious and the fact of their land covered with paddy, proves what I have asserted.

There is another village called Sanjee, lying close to Toung-thoozoo. We were warned by the men of this village not to encamp at Kalouk Koondine, lying three miles from this place, whither we directed our way, on account of the peculiar situation of the village, having jungles on all sides, infested with wild elephants and tigers,—the latter are so ferocious and sanguinary, that they do not scruple to carry away men. We came to the village about 2 o'clock P. M.

4th January.—Left Kalouk Koondine at day-break. Throughout the whole of this day's march, twelve miles, our way was a mere cart-track lying through a thick wood, which impeded the progress of our carts. Couple of miles, before we reached Touk-Kyen, where we encamped, the road, however, became comparatively level.

I observed during this day's movement, foot-marks of wild elephants, and if we are, to judge from them, there must undoubtedly be a good number of these animals.

The village of Touk-Kyen may be said to be celebrated for its extensive plain. Goung Kourke related to us that previous to the late war

that the whole of it was covered with rice cultivation, in order to bring it again to its former aratory condition. He has secured a good number of buffaloes, and anticipates to reap a rich harvest in a year or two hence.

5th January.—Started. The whole of this day's march of 12 miles lay through dense tree and grass jungle and marshy ground; in the former the road for five or six miles was oppilated with felled trees at interstices of every fifty or hundred yards; we were therefore necessitated to remove those capable of being shifted, or contrived a new road, as we considered feasible or expedient.

Through the latter it was not so troublesome, but the hackreewallahs complained that it was too much for the bullocks.

The course lay in a N. E. direction, but after a few hours' circuitous travelling, the route became devious, sometimes E. and sometimes W. In this way, for $2\frac{1}{2}$ miles, we were led to Bwetjee village, and about 12 o'clock A. M. arrived at Kyet Phoogan, a despicable village containing twenty houses. The wretched condition of the place may be imputed to the want of industrious habits of the people, although in the midst of an arable plain agriculture is entirely abandoned.

Three miles from this we passed by another village called Yaithoe, of twenty houses. The inhabitants have every advantage of tilling the extensive plain encompassing their village, but I am sorry to say only one-sixth of the land was seen under cultivation. Leaving this and travelling for a mile, I think we came to Jugdan; here its local features were, indeed, striking, consequent of cultivation being on a much larger scale. Some few hundred spaces from the last-named village we crossed the Mohbee creek and pitched our tents in a village called after it.

6th January.—Halted.

7th January.—Started at 6 o'clock A. M. The general direction was N. W., and after journeying for six miles over an arid ground, apparently hardened from a rapid evaporation since the rains, notwithstanding unpropitious to vegetation, yet we passed through tree jungles and high grass, we were led to Myountaga, containing twenty houses, and encamped in it.

The village is situated on the right bank of a Choung called by the same name. We had a great difficulty in taking the carts across; one of them was upset consequent of the bad driving of the Tombec; indeed the

whole of them, without exception, seemed to me to be a parcel of inexperienced men, not inured to the work which they set out for ; we were therefore obliged to drag the carts over, and in some instances the yokes were unfastened, and by manual means or force, jogged them up to the opposite bank.

About 15 or 20 years ago, the men of this village brought down annually timber from a Forest—no doubt from the Mazalee, lying six miles N. N. E. from this place. The Choung, as we were told by the Goung, has since become unavailable on account of the obstruction, composed of felled trees and rubbish having formed. The obstacle to the removal or the translation of the timber on this can be overcome by an outlay of Rupees 100 or 150.

8th January.—Started at day-break. The general route pursued was N. N. W., and after a wearisome march of 14 miles, reached Yin-dike-quin, a village containing thirty or forty houses, surrounded by small Teak Forests which we estimated to contain one thousand trees of small dimensions.

Two miles from the place we last encamped, we crossed Lekin Choung, a branch of Yathoe, the latter taking its origin from Pijunnadown mountain, the integral range of the Yomah Hills. We were here detained almost an hour to get the carts across. The road from this, about 12 miles, was a difficult one, lying through grass and tree jungle and marshy ground, intersected at intervals of every three or four miles by small Choungs.

In some cases all traces of a path were invisible. This plainly shows that all land communication has surceased since the war. Our guide, Kotha Khway, assured us that we were in a Kway Goe road, (buffaloe stealing-road.) We saw some indications, which convinced us that such was the case.

After crossing Bijin-hyalalway Choung we found that we were close to the Teak Forests. Five miles N. W. march brought us to it, not without the difficulty of crossing Kyoong Choung, and the detention of an hour and a half in seeking for a path which was lost, we struck out through glassy glades, for three-and-a-half miles, and came to Joe Byew Choung where teak appeared to terminate. Here we halted for an hour, and were, indeed, disheartened on perceiving a high land lying between us and the said Choung.

In this dilemma, Dr. McClelland explored the jungle on the right of us and discovered a village called Phet, consisting of a few houses, and obtained a guide who conducted us, after re-tracing our steps and crossing a narrow nullah and a marshy ground covered with high grass, to our present encampment.

4. A day's march. General route N. N. E. brought us to Oakkan. After having accomplished a journey of 16 miles, we proceeded to Thounzai on the 11th January, and remained there two days.

5. The town is situated in latitude $18^{\circ} 21'$. It exhibits the remains of an important place, encompassed by an extensive flat land or savauna, happily intersected by the main stream and its tributaries. The course of the former at its confluence with the Lhine is N. N. \blacksquare , and continues in that direction to its source to latitude $19^{\circ} 20'$, with continuous turns at intervals of every half a mile. Its average breadth is about sixty feet, and its waters during the wet weather are, as we were informed, perfectly clear, with a sandy and rocky bottom. The country towards its junction is level, but gradually rises from Thakanjee, towards the ranges of the mountains on either side of it.

6. The inhabitants of Thounzai are a sottish and ignorant set of Bacchinals, and are thereby easily decoyed and made the agents of detruncating or cutting girdled trees and the surreptitious removal of prone ones by residents of Rangoon. So endless and exorbitant are their desires and their zeal to serve the interests of their employers, that they do not hesitate the transgression of the existing regulations by grasping at all, and can form no scheme of perfect happiness with less.

7. The bartering of timber for aqua vitæ (vulgate brandy) and gunja is another evil or demoralization to the inhabitants; it is producing the most baneful effects.

8. An early application of some efficient remedy for this rapidly extending evil is exceedingly desirable, and that the recurrence to the practice of the Burmese Government is adverted to (two years previous to annexation,) which applied stringent restrictive measures to the use of intoxicating drinks and drugs, would receive the hearty approval of the more respectable portion of the natives, I mean Kyoung and Phrawtagees.

9. The beautiful, healthy, and fecund tracts seem to have been sterilized and entirely abandoned to nature by these men, and it re-

quires not much sagacity to predict that (if Government will accord to the points which have now been specified and to all kindred suggestions connected with the well-being of this district) if they are compelled to return to husbandry, they will rapidly rise to that importance, or momentous character, to which their wonderful natural capabilities so fully entitle them.

10. On the 16th we directed our way to the Teak Forests, which we entered after 14 miles travelling. We had here the advantage of further examining the Choung; it was not quite dry, notwithstanding the advanced state of the season; its bed was filled with rock and pebbles of indurated clay and sand-stone; the banks shelvy, clothed with grass, bamboos and betel palms; with occasional clumps of wild plantain and jungle trees.

11. Behind the main stream runs a range of hills, forming as it were, a belt to the Yomah, covered with Teak, in company with numerous other Forest trees. These constitute Forest tracts, separated or run across, by Choungs into sections, and called after them.

12. The Teak localities commence 14 miles from Thounzai Town; the first we met with stretched a little way along the Naimapyo Choung, and as far as could be ascertained, did not appear to extend far inland. We estimated to contain about 1,000 under-sized trees. Abundance of stumps and stunted shoots (marking the place where the trees once stood,) were also observed, which obviously indicate that the trees in this part of the Forest have fallen dreadful victims to the axe.

13. A regular Teak track may be said to begin two miles above Waijce, a Yaibane village, the inhabitants of which exclusively devote their time to rearing silk-worms, organizing, drawing out, and subtilizing silken filament. I did not find their paddy land or toungyas under cultivation, but about their tais or huts were seen several cucurbitaceous plants and plantain trees.

14. Another Forest was visited on the 18th, lying a few miles from the main stream, and containing about 200 full-grown trees. From this to the Kareenzoo village, a distance of nine miles, we passed through grass and bamboo jungle, Teak occurring in occasional patches of from fifteen to twenty trees.

15. The village (Kareenzoo) may be said to be within the skirt of the Forests, we had the gratification of seeing hundreds of excellent mast-

pieces, and almost an equal number of felled loozars and yats, lying mostly in the defiles (apparently detruded into them by timber-cutters,) more or less destroyed by fire.

16. Six miles in a Westerly direction from the last-named village and two miles from Thounzai Choung, lies another Forest, abounding with a good number of full-sized trees growing on precipitous slopes and narrow plateau of mountains about 600 feet high.

17. The following from my Journal may afford some information :—
 “ Early this morning, after a rough breakfast, we crossed the river, ascended its right bank, and afterwards re-crossed and ascended its left bank (the Choung here being very winding,) and after travelling over non-elevated ground and crossing the Thabyew Choung, the Tabayloo intersected our way. We ascended its course, and had the pleasure of finding that we were in the midst, as may be deservedly denominated, of a fine Teak Forest. It extends from the ridges on the right bank, until it comes quite close to the stream, receding, as it approaches, to the source of the latter and disappearing towards a range of hills which were visible to the North-east. The ground here is in general high, intersected by Teedoo, one of its tributaries. We here inspected the 800 trees, measuring in girth above six feet, recently ringed by order of the Officiating Superintendent of the Forests. The said rivulet and its branch would unquestionably be quite adequate to convey with ease all the timber to the Thounzai Choung.”

18. In addition to the above, I shall content myself with observing that some thousands of Teak might be felled here, and conveyed to Rangoon with facility. No killed trees have as yet been felled since the war, but we have abundance of proof, that the fallen and dead trees have been removed.

19. Since my return from the Forests, I have been informed the killing of large trees in this Forest was very limited. For the conveyance of this description of wood to the nearest nullah, (I mean those situated a pretty good distance from the water carriage,) it would be desirable to employ a number of elephants. Buffaloes might also with great ease be employed in this Forest, the ground for the most part even and unbroken.

20. Little Teak was seen on the 20th January, although we ascended the Tabayloo almost to its source for 12 miles in a S. S. E. direction

This satisfied me of what was recorded in my Journal of a previous date, "receding as it approaches to the source of the latter (Tabayloo) and disappearing towards a range of hills which were visible to the N. E."

21. Our way from this place for eight miles lay over a hilly region covered with bamboo and grass. We had the good fortune, when least expected, of discovering a Kareen village, where we bivouacked and were glad enough, as our provisions had all been consumed, and the obtaining of a day's supply in the wilderness was most providential.

22. The Tsankai Shoayzan (who was appointed a local agent on the 18th January to take charge of the Forests as a temporary measure) being apprehensive that we might be misled by the faithless guides, hotly followed us, accompanied with one of the office peons who was left with him to collect details, and joined us here.

23. The day following, taking a N. E. route, and after crossing Gong Ngyeen near its origin and ascending its left bank, we came to an elevated land, over-grown with bamboos intermixed with Teak forming a natural line of demarcation, separating Thounzai from Oakkan Forests. There are a good many yats and few full-sized trees. The removal of the latter would be attended with difficulty consequent on the remote situation of the Forests from the larger Choungs.

24. The route now became diverse, and on crossing Lhai-gajee and ascending its course for two miles and then ascending its right bank, I found, on looking at my pocket compass, that we were pursuing a S. W. course, and proceeding the march in that direction for six miles, we came to Kyouk Nhouk, which we crossed. Referring then to the office diagram, I found this to be a branch of Natsin (one of the extensive tributaries of Oakkan Choung,) and indeed we were led to it after following up for a mile the bed of the former.

25. The region occupied by the Thounzai Forests consists of an elevated land about six or seven hundred feet high, having two cardinal ranges on the East and West side of the Choung, slightly trending at a distance of half a mile to one towards one another, and indeed they almost meet, as remarked by us, near Thaybew Choung.

26. The Eastern range, as far as I can learn, runs due N. ; I should estimate its width to be about 25 miles ; the Western keeping somewhat closer with gentle slopes to the main stream.

27. The Forests, though divided by the Choung into, say Eastern

Kyet-poan.
Nainiapyo.
Kyet-myoun.
Nahmap-houk
Yaigyeo.
Kyonkpyoke.
Nga Youpma
Nga Ywai.
Shiun.
Gongugyeon.
Thabyow.
Tabuyloo.
Pyah.
Yaionng.
Nyahyeo.
Kanyonbyen.
Coodoogwai.
Yotnet.
Yeet.
Phyan.
Wahphew.
Baulau.
Woon.

and Western sections, yet, in their minor features, they exhibit no difference of physical configuration. The first thing that draws a traveller's attention is the innumerable succession of subordinate streams—their names are given in the margin—intersecting the Forest tracts presenting to his view. He also finds the singular fact that they are perfectly alike both in ratio and number.

•28. The favorable *habitat* of Teak is on high ground, not liable to submersion; it has been stated by the late Captain Latter "to be a peculiarly dry and arid-looking plant." I never yet found, in any one instance, that it grows gregariously, but observed it in company with *Inga xylo-*

carpa, *Diospyros*, *Dipterocarpus levis*, *Dalbergia*,* *Lagerstaemia regina*, *Careya arborea*, *Heritiera minor*, *Pterocarpus dalbergiodes*, and other jungle trees. I have made a rough estimate of the number of Teak trees growing in these Forests, they seem to contain 1 in 400 of their associates.

29. From the details we have gathered, there are in them 375

Killed Trees.

64 of 7 feet and upwards in girth.
53 " 6 " "
253 " 4 ft. & 6 in.

Felled Trees.

251 of 7 feet and upwards.
128 " 6 " "
734 " 4 ft. & 6 in.

* Phalone.
Gwai.
Yindike.
Oakkan.

killed timber and 1,113 felled, all situated one mile the nearest distance, and two the farthest from the Choungs. Their dimensions are marginally noted.

30. On the 22nd January, after having performed a journey of 29 miles, crossing the Choungs named in the margin,* we came to Shawbone, a village situated on the East of the Oakkan Choung and lying 12 miles from the town of Oakkan.

31. We left this place the following morning and divided our way to Kinpathee (on the Magayer Choung,) which we reached after crossing Datchoung on the Oakkan side; and pursuing a Southerly course for 10 miles, on the morning of the 24th we started for Yindike and arrived about 3 P. M.

32. The Teak Forests of Oakkan do not go lower than latitude $18^{\circ} 52'$, or they are only to be found in the tracks through which the Choung and its tributaries run.

33. The main stream takes its rise from the Yomah hills, about 110 miles from Rangoon town in a Northerly direction, and continues its course nearly S. W. to latitude $18^{\circ} 15'$, emptying itself into the Lhine River about 50 miles from Rangoon.

34. The subordinate rillets which divide the Forest tracts are "Katayaza" 1, "Kyet-thoung" 2, "Yindike" 3, "Khway" 4, "Phalone" 5, "Nassin" 6, "Majoo" 7, "Kyoung" 8, "Dah" 9, "Sinoh" 10, "Mee-joung" 11, "Thayaneu" 12, "Bumathay" 13, "Meedway" 14, "Thadan" 15, and "Wetsway" 16. Nos. 1 to 7 lie on the North side of the Choung, and Nos. 8 to 16 on the South. The quantity of timber remaining in the former may be estimated 630 trees of seven feet six inches in girth and upwards, 1,050 of six feet, and 2,600 of four feet six inches, and in the latter 400 of seven feet six inches, 600 of six feet, 2,100 under-sized trees, all lying within two miles the furthest distance and one the nearest from the water-carriage. On the Forest No. 11, there are 533 logs above six feet, which were killed by order of the Forest Department and on No. 3 sixty-seven trees.

35. From the above computation I have made, it is obvious that the resources and capabilities of the Northern tracts must be far superior to those on the Southern, although the evil and circumstances of both banks are the same.

36. On the 29th January we started from the place of our encampment for Thakhunjee village (lying eight miles in E. N. E. direction from Yindike) to examine the conterminous Teak Forests of Magayee and Mazalee, after which to cross the Yomah into the Phoungyee valley. We reached the place about 10 o'clock A. M.

37. The Mazalee Forests lie about four miles N. E. of the above-named village, or two miles from Kyoukpasat, a branch of Thanat, one of the tributaries of Magayee. The summits of the hills were seen covered with Teak, not growing gregariously, but in elumps of eight or nine, interspersed with other kinds of timber, at distances from each other.

38. The contents of these Forests are, 300 of nine feet in girth, 600 of seven feet six inches, 1,700 of six feet, and 3,800 of four feet six inches, lying within two miles of the stream.

39. The Choung is obstructed by the accumulation of rubbish and sediment, and can be removed at a trifling expense.

40. The Forests on the Magayee are situated 12 miles N. of the Thakhanjee village. The following extract from my previous Report, dated 21st December 1853, regarding these Teak tracts, may be interesting:—

Moung Kine, a resident of Khoon-na-Kyke, a town bordering on the Lhine, states:—I am perfectly acquainted with the Magayee Forests; I know also the main Choung and its tributaries; their names are—

1. Kayoo Choung,
2. Tha Byew, and
3. Thanat.

No. 1. Kayoo is situated 15 miles from the confluence of Magayee. Its forest is very extensive, being about 10 days' journey in circumference, and contains Teak of very good quality.

No. 2. The Byew lies 10 miles from Phalone village. The Forest is very large and abounds in particular with a great quantity of killed trees, say about 2,000.

The Forest on No. 3, Choung Thanat, is the best Forest, and is far superior to those lying on Nos. 1 and 2 Choungs, both as regards to quantity and quality of the wood.

The deponent on being called and re-examined states:—The Magayee is blockaded up with lopped-off branches and trees. I should say that if partly cleared with the axe, and accumulating them to be afterwards burnt in the month of March, it will cost only Rupees 1,000. If this measure be adopted and carried into execution the timber of this township can be brought into market on the ensuing season.

Questioned by the Head
Assistant.

Yes, the reason why so many trees have been killed (considering the Choung being deprived of water-carriage) is, because it was the intention of the Burmese Government to employ men to remove this obstacle, and to compensate them with all the felled logs—all the killed and felled trees I should say. The Burmese Government assumed an undisputed right to them.

The villagers of Kurpathee were in the habit of dragging the timber of small size overland.

REMARKS.

The resources and physical characteristics of the Magayee Forests having become a subject of interest and enquiry, both by the Superintendent of Forests and the Commissioner of Pegu, I have, therefore, taken the deposition of Mounk Kine, who appears to be a very respectable man, and whose statement I am inclined to look upon as worthy of credence : besides this I have obtained other information, which I trust will complete the partial Report I previously submitted regarding these Teak Forests.

A thorough appreciation of these Forests cannot be given without recording—

1st.—The boundaries of the town of Phalone, after which the main stream, now under notice, is named.

2nd.—The physical features of the main stream and its origin.

The town of “Phalone” lies six miles from the Lhine, having a deserted town, Tamboo, on the East, Phogoun village on the West, Inckaloon on the North, and Myomah village on the South.

Under the second head I shall recapitulate what I have said in the previous Report :—

“The Magayee *alias* Phalone takes its source from Kamalee mountains, 20 miles above its junction with the main stream Lhine ; it is blocked up with fallen logs and rubbish, which has formed into a bar covering a space of 20 miles.”

The region occupied by the Magayee Forests on the Choungs Kayoo, Thabyeed, and Thunat, (differing in physical aspect than of those lying on the Lhine,) consists of an elevated land of a digitated shape or appearance, commencing four miles from Phalone village to the Kamalee mountains, the integral range of Yomah.

The Forests are, as I am told, almost uninterruptedly immense.

The *Lagerstroemia regina* or *Pymmah* is also found in these parts in abundance ; it stands without a rival in strength ; “for,” says Mr. Mason in his work entitled *The Natural Productions of Burmah*, “that the posts of an old wharf at Tavoy, which were of this wood (Pymmah) stood erect for twenty or thirty years.” He seems however to consider that house posts often decay in the ground in a much shorter period. It is considered a valuable timber in ship-building.

The *Kanazo*, *Heritiera formes*, or what is called Soondree, is indigenous on these localities, and in some sections is quite abundant. Dr. Wallich, regarding its qualities, does not doubt to assert that it stands unrivalled for elasticity, hardness, and durability, and which he says, "If it is not extensively employed for the construction of naves and felloes of gun carriages, it is solely because pieces of adequate dimensions are not procurable." Now my informants peremptorily assert, that immense quantities, sufficient for such purposes, are obtainable here; "besides," continues this learned gentleman, "the charcoal made from it is better than any other sort for the manufacture of gunpowder."

I shall here take the advantage of making up the omission which was inadvertently left unexplained in my last Report, and which Captain Phayre has properly remarked—"It is stated there are 2,500 killed trees in the Forests of this stream, though why they should have been killed, on a stream where they would remain sealed up, is not explained."

The statement of Mounge Kine explains this, and I may add, that although the Forests are deprived of water-carriage, yet the resources annually drawn were from one to two hundred loozars, which were expressly and invariably dragged in the middle of the rainy season, when the surface is moist and slippery, because it thus requires one tithe of the labour necessary in other seasons, when the surface is rough and impeding.

I attach little importance to the suggestions of Mounge Kine, regarding the method to be pursued for the removal of the local impediment from the main rill. Persons who are acquainted with the destruction caused by the periodical fires of the Attaram Forests would, without doubt, consider this prosecution of measure objectionable. The vegetation would, on the time recommended, be dry and parched; conflagrating the rubbish in the stream, would supply the devouring element with life, and thus the young, old, killed and prone trees be annihilated. My opinion is, that the obstacle should be removed by manual means.

In conclusion I respectfully beg to remark, relative to persons possessing certain undefined prescriptive claims on the trees of our Forests, I must record, as a general opinion, that none were recognized as such by the Government of Ava; the wood-cutters, or contractors, as they were generally called, on paying Pouksane Akoon (axe tax) were permitted to work the Forests, under condition that all timber should be removed on

the same year, on failure the Government resumed them as their property ; this is as regards trees fit for felling and already felled : killed trees they have from time immemorial invariably maintained a prerogative right to them.

This summary manner of resumption may, to the eye of the law, be illegal. I would humbly suggest that a complete and exclusive property in every tree in which they (the claimants who satisfactorily establish their rights) had killed and seasoned should be withheld, remunerating them according to usage and expediency.

41. In our late exploratory visit we were put in possession of data to justify me in asserting here the number of killed, felled and green trees in the Forests of the Magayee stream. Green trees 150 of 9 feet in girth, 700 of 7 feet 6 inches, 1,100 of 6 feet and 3,400 yats ; killed 150 of 6 feet and 280 of 4 feet 6 inches ; felled 314 of 6 feet and 342 of 4 feet 6 inches.

42. It may not be irrelevant to mention here the new mode of late introduction of transporting clandestinely the timber across the country where the ground is rough and dry. The timber is carted and dragged by buffaloes which are stationed at different stages down to the streams.

43. On the 23rd January 1854, we met 10 or 15 men with six carts laden with timber, near the village of Pynmah, on the Dat Choung, one of the branches of the Oakkan, all bearing the following mark in Burmese.

44. *31st March.*—Started in an Easterly direction for three and-a-half miles, the bed of the Mazalee Choung, when we ascended its left bank (not without first meeting one of its tributaries called Toungtan descending from the Yomah in a S. E. direction) and pursued a circuitous way for two miles in a S. E. direction, when we descended into Nghetkyee, another branch, and ascended its right bank, over a land in some places approaching almost to perpendicular for three miles, crossed the Yomah and with difficulty slided its declivity into Wah Choung, one of the lower branches of the Phoungyee, descending its bed for five-and-a-half miles, we reached the village called after the Choung.

45. I may mention here that, at the confluence of Looboke, a subordinate stream of Wah, we observed its arenaceous bed partially com-

planated, occasioned by timber recently trailed or dragged along by buffaloes, whose foot-prints were visible and no way obliterated.

46. Visited these Forests, but they contain about fifty full-sized trees ; the number of stumps which were observed at every thirty yards convinced us that they must have been worked by the timber dealers with a vengeance.

47. On the 21st February we directed our way to the higher Teak tracts—we explored them within ten miles of the Yomah where they seemed to mucronate, I should estimate to contain 100 full-sized trees from seven feet and upwards in girth. Innumerable show of half-grown trees, measuring in girth four feet six inches, were seen on the ridges.

48. Examined the Mahooya Forests, lying 28 miles S. S. E of Phoungyee Town. Teak appeared large and in abundance, extending from seven or eight miles, along N. E. side of the Phoungyee valley. The way we went was through low narrow vales with hills on our right and left, forming like two walls ; on these regions were Teak seen, but they were remarked to improve in quantity and quality in the declivities.

49. The almost total disappearance of the full-sized trees from the Phoungyee Forests, except Mahooya, is easily intelligible from what has been stated in the preceding paragraphs. The said Forests from their accessibility (having an excellent Choung of sixty feet) and proximity to town was early worked, and have been for thirty or forty years, as I am informed, incessantly under the full operation of the axe.

50. The numerous stumps (showing how much the resources have been drained) satisfied us that extensive felling have been carried on—nay, ever since the war, they are rapidly approaching to exhaustion, and requires no Euclid to solve the problem.

51. The yats, however, I am glad to state, bear in proportion to the vast quantities of trees which have been felled and are rising in adequate quantity, and consequently the removal to the requirements of the Forests will be renewed or will keep up the supply in a course of twenty years.

52. We entered into the Pegu or Zamayee Forests, after crossing a succession of protuberant land covered with abundance of teak of all sizes, and following the course of the tributaries of Mahooya to their sources and descending into Thaneo, a branch of the Pymmah.

53. In traversing this part of the country, watered by the Zamayee River, it was gratifying to observe almost on all localities Teak interspersed with the other jungle vegetation, and by proper management they will certainly ensure a large and never-failing stock of Forest timber.

54. The hills here on the N. E. direction (which are higher than those we crossed) come down to the Choung; they have no connection with the Shoay-gyeen hills or those of Tounghoo. The Yomah hills run North to South, round the extremity of Koutaga Forests, and it is from this range the main stream takes its rise.

55. The Teak tracts, mullioned by the Choungs into twenty-three sections, viz., ten on the Eastern side of the stream and thirteen on the Western, extend along its course; the best and the most productive, I should say, are Tadaw, Monyogalay, Monyojee and Khadat.

56. These Forests, although they have not escaped the ravages of the axe, they, of all others, best exhibit the characters of a regular Teak Forest.

57. We could gain no information as to the existence of any felled Teak on either side of the stream already mentioned; in fact, I believe it is generally known that all such available timber were seized and appropriated by contractors deputed by the residents of Rangoon.

58. In summary, I respectfully beg to observe, that none of our Rangoon Teak Forests can with propriety, or would authorize such an appellation of being called inexhaustible.

59. The quantity of Teak that will be now required for the erection of private and public buildings, and its demand is so great in Calcutta and Nagore, that they will be soon impoverished if stringent rules were not introduced for their conservancy.

60. The system of allowing persons (as during the Burmese time) to work the Forests without keeping them *in terrorem*, or inflicting heavy fine and confiscation for the least transgression of the existing rules, may be ruinous. They will lay their hands on all that come within the scope of their avarice.

61. I shall here record what some of the oldest inhabitants of Pegu town deposed before Mr. Grant, the Assistant Commissioner: they ran away with the idea that, as the Forests seem to be inexhaustible, their speculations, calculated as present profit or loss, may be unlimit-

ed, without entertaining the slightest apprehension of depriving the future generations (by their improvident cutting) of the benefit they now enjoy.

62. In illustration of the above I shall quote the following from my Note-book :—

“ I remark at this place (Yindike-quin ?) that the small trees which constitute the Forests were molested and mutilated by the people of the district ; whenever a person evinces a desire to purchase yokes for his buffaloes, handles for dals, &c., they procure for him in the adjacent wood.”

63. The cutting of yathits should be, as far as practicable, prohibited. However desirable it may be to forbid or enforce such a rule, I must profess that I am at a loss to know how such impediment can be attempted or laid without stopping the trade of yard-pieces, which are just as much in demand as mast-pieces.

64. The subject does not appear to have escaped the attention of our worthy Officiating Superintendent of the Forests, who has very properly come to a conclusion which will not at all excite any discontent, that all that can be done for their discontinuance in some degree is the imposition of an uniform duty, increasing it as their transportations are augmented.

65. In conclusion, I humbly beg to suggest, that an encouragement should be given for the transition of full-sized trees, with the view—

1st.—That a large consignment of timber might be realized and duty received on them.

2nd.—It will facilitate the growth of the under-sized trees.

(Signed) R. ABREU,

Head Asst. to the Offg. Supt. of the Forests.

RANGOON,
The 18th March 1854. }

(True Copies.)

(Signed) A. P. PHAYRE,

Commr. of Pegu and Agent to the Gov. Genl.

No. 3.

To

CAPTAIN A. P. PHAYRE,

*Commr. and Agent to the Gov. Genl. in Pegu,
Rangoon.*

SIR,

IN continuation of my letter No. 82, of the 5th instant, I have the honor herewith to submit for your approval the manner in which I would propose to dispose of the 13,067 logs of seasoned timber adverted to in the 37th para. of my Report on the Southern Forests of Pegu, together with the old branches suitable for crooks now lying in the Forest.

2. The seasoned timber in the Hlaing Forests, situated on the Magayee and Mazalee or Indoon Choungs which contain 1,641 logs, will not be available this season in consequence of certain temporary obstructions arising from the encroachment of bushes and trees on the beds of the Choungs in places for several miles from their junction with the main river.

3. Deducting the 1,641 logs of seasoned timber above-mentioned, there will remain 11,426.

4. As the seasoned timber now remaining in the Forests (having been either killed or felled in the Burmese time) is mostly under-sized, the new tariff would be inapplicable to it; it was therefore proposed in the 37th para. of my Report to advertize and sell the whole at upset prices corresponding with the average rates realized at auction sales in Rangoon during the past season.

5. But as the basis on which the average amount realized at auction sales will be seen from the annexed statement to be too limited, as regards some classes of timber, to afford a good criterion of the real market value of timber at Rangoon, and the expense of bringing it into market from the Forests being taken into consideration, I would propose Rupees 8 per log for full-sized timber, and Rupees 4 per log all round for yatthet or under-sized Timber as the upset price,* and that the sale should take place, as at Moulmein by sealed tenders as affording the best

* Should the scale of rates proposed in Table III. be reduced from Rupees 7-15-5 per log to Rupees 5-11-3, I would propose corresponding reduction in the upset price of seasoned timber from Rupees 8 to Rupees 6 for full-sized and Rupees 3 per log all round for under-sized timber.

security against fictitious purchases which might be made by parties without any intention of fulfilling the conditions of the sale.

6. With regard to masts, keel-pieces and yards as a distinct class of timber, I would apply the new tariff crediting the contractor with the amount of original purchase, which would be deducted from the amount of duty charged at the new rate

7. And in case of crooks, as these are for the most part the produce of branches (not included in the timber to be offered for sale,) of which there may be found a considerable accumulation in some of the Forests ; I would likewise at once apply the new tariff, and allow the contractor to remove all such as may be found cut and lying in the Forests, subject merely to the new scale of duty.

I have, &c.,

(Signed)

J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

OFFICE OF THE OFFG. SUPDT. }
OF FORESTS IN PEGU, }
Rangoon, the 3rd May 1854. }

No. II.

STATEMENT of the Average amount realized per Log, for the different classes of Timber including those sold under the Deputy Commissioner's Court, by Public Auction, at Rangoon, during the past season.

No. of Logs sold during the past season.	Description.	Total Amount.		Average amount realized for each class of Timber.		REMARKS.
17	Dooies,.....	544	0	At Co.'s Rs.	32 0 0	per each.
65	Loozars,.....	962	0	"	14 12 9	"
425	Yat-heets,.....	1832	0	"	4 4 11	"
2	Mast-pieces,.....	355	0	"	177 8 0	"
4	Yard ditto,.....	222	0	"	55 8 0	"
2	Doodoes,.....	20	0	"	10 0 0	"
1	Shinbryn,.....	5	0	"	5 0 0	"
	Planks, Slabs, &c.,....	6	0	"	6 0 0	"
516		3946	0			

(Signed)

J. McCLELLAND,

Offg. Suptd. of Forests, Pegu.

OFFICE OF THE OFFG. SUPDT.
OF FORESTS IN PEGU,
The 3rd May, 1854.

No. III.

STATEMENT of the seasonal Teak Trees in the under-mentioned Divisions or Tracts.

Name of Division.	No. OF TREES READY TO BE BROUGHT DOWN THIS SEASON.						REMARKS.
	Nathats.		Killed.		Felled		
	Under 6 feet girth.	Above 6 feet girth.	Under 6 feet girth.	Above 6 feet girth.	Under 6 feet girth.	Above 6 feet girth.	
Thounzai,.....	70	55	293	82	955	177	1632
Oakkan,	2	...	167	225	1164	461	2019
Phoungyee,	306	340	661	367	285	21	1980
Pegu, .....	...	..	5285	510	...	...	5795
Total,.....	378	395	6406	1184	2404	659	11426

(Signed) J. McCLELLAND,
Offg. Supdt. of Forests, Pegu.

OFFG. SUPT. OF THE FOREST'S OFFICE, }
The 3rd May 1854.

No. II.

STATEMENT of the Average amount realized per Log, for the different classes of Timber including those sold under the Deputy Commissioner's Court, by Public Auction, at Rangoon, during the past season.

No. of Logs sold during the past season.	Description.	Total Amount.	Average amount realized for each class of Timber.				REMARKS.			
17	Doogies,.....	544	0	0	At Co.'s Rs.	32	0	0	per each.	
65	Loozars,.....	962	0	0	"	"	14	12	9	"
425	Yat-heets,.....	1832	0	0	"	"	4	4	11	"
2	Mast-pieces,	355	0	0	"	"	177	8	0	"
4	Yard ditto,	222	0	0	"	"	55	8	0	"
2	Doodoes,	20	0	0	"	"	10	0	0	"
1	Shinbym,	5	0	0	"	"	5	0	0	"
	Planks, Slabs, &c.,...	6	0	0	"	"	6	0	0	"
516		3946	0	0						

(Signed)

J. McCLELLAND,

Offg. Supdt. of Forests, Pegu.

OFFICE OF THE OFFG. SUPDT. }
 OF FORESTS IN PEGU, }
The 3rd May, 1854.

No. III.

STATEMENT of the seasoned Teak Trees in the under-mentioned Divisions or Tracts.

Name of Division.	No. of TREES READY TO BE BROUGHT DOWN THIS SEASON.						REMARKS.	
	Nathats.		Killed.		Felled			Total.
	Under 6 feet girth.	Above 6 feet girth.	Under 6 feet girth.	Above 6 feet girth.	Under 6 feet girth.	Above 6 feet girth.		
Thounzai,.....	70	55	293	82	955	177	1632	
Oakkan,	2	...	167	225	1164	461	2019	
Phoungyee,	306	340	661	367	285	21	1980	
Pegu, .....	...	..	5285	510	...	...	5795	
Total,.....	378	395	6406	1184	2404	659	11426	

(Signed) J. McCLELLAND,
Offg. Supdt. of Forests, Pegu.

OFFG. SUPT. OF THE FOREST'S OFFICE, }
The 3rd May 1854.

MEMORANDUM.

No. 1 is the draft of a proposed notice drawn up in terms corresponding with the Notice already published, prohibiting the felling of timber in the Government Forests, but which is silent on the subject of the removal of felled timber.

During the past season all felled timber lying in the Forests at the date of annexation that had owners may be presumed to have been removed. The felled timber, of which an inventory was taken during my late tour of the Southern Forests, and which it is now proposed to sell on the part of Government, lay at a distance from Khoungs in the midst of the Forests, notwithstanding which parties without authority have recently resorted to the unusual practice of carting and dragging it for the distance of eight or ten miles in some cases, and by this means obtaining possession of it at a considerable expense before the Khoungs open, when it might be removed in the usual way for a tithe of the expense.

The inducement to resort to this extraordinary means of obtaining possession of the felled timber is that they now obtain it for nothing, while they know if they waited until the Khoungs open, they would have to buy it.

It is to put a stop to this and to secure the interests of Government in the felled timber in question that Notice No. 1. is proposed.

Notice No. 2.—The object of this is to enable owners of timber to bring it into market as soon as the state of the rivers may enable them to do so conveniently without being exposed to the higher rates proposed in the new tariff for such timber as they may have already in hand, thereby relieving all existing transactions relative to timber actually in the legal possession of parties from new rates, which they might otherwise justly complain, were not in contemplation at the time when such transactions were entered into, while it will also have the effect of bringing out all timber that may be concealed or secreted throughout the country.

Notice No. 3 is not yet drafted, but will consist of the new tariff based on Table 3 attached to my Report. With respect to that Table, it embraces the description of timber which alone it is proposed to recognize, derived from Seppings' statement of Teak timber imported from Rangoon, Moulmain, and the Tenasserim Provinces into Calcutta, page 122 of

Selections from Records of the Bengal Government, published by authority, 1852.

The 1st column exhibits the Calcutta prices less 25 per cent. The 2nd, 3rd and 4th columns exhibit the dimensions of each class of timber. The 5th column exhibits the amount of mast and keel-pieces at 25 per cent. under the Calcutta rates. The 6th column exhibits the tonnage of each piece. The 7th column exhibits the amount of duty on each piece, deduced from the amount of tonnage at Rupees 40 the ton, and in the case of mast and keel pieces from the Calcutta rates per running foot (less 25 per cent.) But as I find on further reference to Seppings' Table above referred to, that the prices he gives includes losses for unsoundness, which may be set down at 10 per cent. and insurance and other charges at 15 per cent. more, we might deduct 50 per cent. from Seppings' Calcutta rates as a safe approximation to the Rangoon value of mast and keel pieces, when we should have the following results :—

				Rs. As. P.
Keel pieces, large, ...	Rs. 3 per foot,	Rs. 165 duty,		24 12 0
Ditto, small, ...	„ 1-8 ditto,	„ 71 „		10 11 5
Mast pieces, large, ...	„ 5 ditto,	„ 360 „		54 0 0
Ditto, middling, ...	„ 3 * ditto,	„ 195 „		29 4 0
Ditto, small, ...		„ 37-8 „		5 8 4
Boat crooks, small, ...		„ 3 „		0 4 0

The above rates might therefore be adopted which are little more than half the amount originally proposed.

With respect to the other descriptions of timber, namely, large, middling and third sort of crooks and logs, I find, according to the tonnage or cubical contents, that estimated at Rupees 30 per ton, little reduction can be made since the market rate of timber in Rangoon, more especially the rates paid by Government for timber for naval purposes, is I believe 45 and 46 Rupees per ton.

At Rupees 30 per ton, the cubical contents of the following pieces of timber, according to the dimensions given in Seppings' Table, would yield the following results :—

Large Crooks,	Rs. 2 11 4 duty each.
Middle ditto,	„ 1 8 1 „
Third sort ditto,	„ 1 0 10 „

All the foregoing descriptions of timber are taken from Seppings' Report, and it is only necessary to add to the list logs, *i. e.* of the standard size of 6 feet girth 25 to 32 feet long, containing 1 ton and 14 cubic feet, which, at Rupees 30 per ton, would, at 15 per cent., be Rupees 5-11-3.

I would not recommend lower rates to be adopted, and I do not think the practice at Moulmain should be allowed to operate here, because we know the Forests there to be on the eve of exhaustion, a result which it should be our object to guard against as regards those of Pegu.

There are little points which, in drawing up the details of the tariff, it will be necessary to attend to, which it would be useless to enter into here.

(Signed) J. McCLELLAND.

No. 1.
NOTICE.

The Forests of Pegu having been declared to be the property of Government, any person removing Teak timber from them without authority will be liable to prosecution according to law. All timber, which may have been recently dragged or removed from the Government Forests, or which may be removed hereafter without authority, will be liable to confiscation.

By Order,

(Signed)

J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

OFFICE OF THE OFFG. SUPDT.
OF FORESTS AT PEGU ;
Rangoon,
The 3rd May 1854.

}

No. 2.
NOTICE.

It having become necessary to alter the existing duties levied on Teak timber, all owners of timber, which has not yet paid duty, are invited to point out the same to some one of the Forest Assistants or Goungs noted in the margin, and in his presence, and with his aid to register the same, the said register must be filed in the office of the Superintendent of Forests within one month from this date for timber lying in the Hlaine, Phoungyee and Pegu Rivers and tributaries below the boundaries of the

Teak forests, and within forty days from this for timber in the Tharrawaddy district, and within fifty days from this date for timber lying on the Irrawaddy and Sitang Rivers and their tributaries below the boundaries of the Teak Forests.

After the above dates no registration of ownership of timber can be received, and all timber not registered will be liable to the new rates which will then come into operation.

The registration is not to be extended to any description of timber within the limits of the Teak Forests, *i. e.*, Eastward of the village of Sakhangyee on the Thongzai, of Shawbone, on the Oakkan, Yindike Quin and Myoungtoga in the Hlane districts, or Northward of the Mahooya Choung in the Phounghyee or Tandangyee Choung on the Pegu River.

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

OFFICE OF THE SUPT OF
FORESTS IN PEGU,
Rangoon,
The 3rd May 1854. }

(True Copies.)

(Signed) A. P. PHAYRE,
Commr. of Pegu and Agent to the Gov. Genl.

— — —
No. 4.

NOTIFICATION.

1. TENDERS are invited for the purchase and bringing down this season of the seasoned killed, nathat, as well as felled timber, in the tracts

mentioned in the Table annexed,* at a rate not less
* *Vide* Table No. 3, than Rupees 8 for full-sized timber, that is, of five
dated 3rd May 1854. feet girth and upwards, and of Rupees 4 for all
(Sd.) A. P. P.

timber under five feet girth.

2. The price tendered to include duty, except in the case of mast, teel pieces and spars, upon which a duty will be charged agreeably to the new tariff, less the amount per log of original tender for each mast piece, teel piece and spar, which will be credited to the contractor.

3. Crooks to be charged separately, according to the rates of the new ariff.

4. Tenders for each tract to be separate, but the same party may tender for one or more tracts, and the tender to be accompanied with a guarantee for the immediate payment of one-third or purchase money on the tender being accepted.

5. Further particulars relative to the details of killed and seasoned timber in the tracts referred to may be had in the Office of the Superintendent of Forests.

6. Should there be more killed and seasoned trees in any tract than may be enumerated in the Table, such additional timber may be taken at the contract rates on being pointed out by the Forest Goung, and charged separately in excess on reaching the Revenue Station.

7. All timber within the term of the contract will be pointed out to the contractor and marked by the Forest Goung, to whom receipts will be given for the timber removed, and any timber brought down in excess of these receipts will be treated according to the terms of the new tariff.

8. A second instalment, amounting to one-third of the sum tendered as purchase money, to be paid by the 1st July, and the payment to be completed in full by the 15th of August 1854, failing in which after that date all timber that may be brought from the tract included in the contract or belonging to the party tendering that may arrive at the timber Revenue Stations will be seized, and the party or parties if necessary held otherwise liable for the full amount of the sum tendered.

9. No transfer or sale of the timber tendered for, effected during transit, can be held legal or complete until it has passed the Timber Revenue Stations.

10. Tenders to be sent under seal on or before 5 P. M. on the 22nd day of June 1854.

(Signed) J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

OFFICE OF THE OFFG. SUPT. OF
FORESTS IN PEGU;
Rangoon,
The 4th May 1854.

(True Copy.)

(Signed) A. P. PHAYRE,

Commr. of Pegu and Agent to the Gov. Genl.

To

J. McCLELLAND, ESQUIRE,

Superintendent of Forests, Rangoon.

FORESTS.

SIR,

I HAVE the honor to acknowledge the receipt of your letters
and their enclosures as noted in

No. 82, dated the 5th April 1854, enclosing your
Report on the Southern Forests of Pegu, and observations
upon the route pursued by Mr. Abreu.

No. 3, dated 3rd May 1854, with drafts of Notices,
1, 2 and 3.

the margin. I also received a
further explanatory Memo. from

you on the morning of the 6th

instant, when I was leaving Rangoon for Bassein.

2. I have to return you my special thanks for your interesting and
valuable Report upon the Southern Forests, which will be submitted for
the information of the Most Noble the Governor General in Council.

3. While fully agreeing with you in your general views regarding
the plan which it is advisable to adopt for the preservation of the Forests
from useless destruction, I am of opinion, that the rates of duty proposed
by you, to be placed on timber, are somewhat too high. I have expressed
my opinion on the subject in the shape of a Memorandum, of which a
copy is herewith appended, and I have added thereto a Table of the rates
of duty I propose to adopt pending the sanction of the Supreme Govern-
ment. I have taken as the standard log a timber less than forty feet
in length and full five feet girth. On that log I have put a fixed rate
of Rupees 3. This is according to the plan now in use at Moulmain.
The rate is indeed somewhat less than the average of that adopted at
Moulmain, but the latter includes mast pieces, which will be separately
charged for duty at Rangoon. The duty for mast-pieces, spars, &c., I
have put upon the length of running feet as simpler and more conven-
ient than any other method of computing the amount of duty. The
amount of duty on crooks is precisely the same as that taken at Moul-
main. I request you will have the goodness to issue this revised Table of
duty as soon as possible.

4. There are one or two points which I think should be distinctly
stated on the face of the tariff, namely, whether five feet is to be the

minimum girth of *any portion* of the log, or whether the average girth taken at either end of the log, and at the centre, must be full five feet. It will be advisable also expressly to prohibit all under-sized timber, shinbins, &c. I request you will have the goodness to embody these rules in a set of regulations, embracing every necessary point to be observed by parties bringing down timber on the general plan of those adopted at Moulmain. I conclude that the rule for excluding under-sized timber will not apply to such timber as spars, smaller masts, &c. required for naval purposes. This should be distinctly stated in the rules which I have requested you to frame.

5. The Notices Nos. 1 and 2, which you propose to issue, I request you will publish without delay. I consider, however, that timber not actually in the limits of the Forests, on the day the Notice No. 1 is issued, should not be interfered with.

6. With regard to Notice No. 3, inviting tenders for the purchase and bringing down of timber now killed or felled in the Forest, as the new tariff would not be applicable in the case of under-sized timber, it is necessary to adopt a minimum rate of purchase money, which shall include all duty, except in the case of mast, keel and yard pieces and spars, or as I understand this division, all timber of forty feet length and upwards. In a note to your letter No. 3, of 3rd May 1854, you have proposed an upset price of Rupees 6 for full-sized trees and Rupees 3 for under-sized trees all round, that is, should the rate of duty per log be reduced to Rupees 5-11-3. As however I propose to reduce the duty to Rupees 3 per log all round, I would make the upset price, for full sized and under-sized trees, Rupees 4 and Rupees 2 respectively.

7. It is desirable that in the Notification for tenders, the several Forest tracts should be defined as accurately as possible, and that in the event of any breach of contract, any money deposit made by the contractor may be forfeited to Government, and the timber either in, or removed from the Forest, included in the contract, be liable to confiscation to Government. The Notification should include all particulars contained in para. 7 of the Notification on this subject, from the Forest Department, Tenasserim Provinces, dated 1st June 1852. A period of two months should be given for the payment of the second instalment of the purchase money, and of three months for that of the third, from the date of acceptance of the tender.

8. For crooks I would merely apply the new tariff, allowing the contractors, as proposed by you, to remove all such as may be found cut and lying in the Forsets.

I have, &c.,

(Signed) A. P. PHAYRE,

Commr. of Pegu, and Agent to the Gov. Genl.

PEGU COMMISSIONER'S OFFICE; }

Bassein,

The 18th May 1854.

*Memo. on the Report of the Superintendent of Forests, dated
15th May 1854.*

1. DR. MCCLELLAND is of opinion, that in consequence of the intricate nature of the Forests, and their great extent, it would be impossible by any amount of vigilance (unless indeed with an army of watchmen, the expense of which would be enormous) to prevent Teak trees being surreptitiously felled and dragged away. It is not therefore advisable. Dr. McClelland considers, to sell the unfelled trees in the Forest, at a price inclusive of all duty, since that plan would involve the cessation of all inspection of the timber after it had passed out of the Forests.

2. It appears therefore to be necessary to impose a duty upon Teak timber, which shall render every log liable to inspection, until it shall have been passed at certain stations in the neighbourhood of Rangoon. By means of strict rules regarding the standard girth of timber brought to the duty station, and a vigilant control over the subordinate establishment who will have to carry out those rules, an efficient check may be kept upon the working of the Forests.

3. It is proposed that killed trees be sold at a nominal upset price, and subject to a scale of duty according to the class of timber; that no under-sized timber of any kind be admitted to the market, (as soon as the present under-sized trees killed during the time of the Burman Government shall have been got rid of,) and that the tariff shall only recognize the following timber:—

- 1.—Mast, yard, keel and spar pieces, or timber from forty feet in length and upwards.
- 2.—Full sized logs, *i. e.*, any log less than forty feet in length and five feet in girth.
- 3.—Stem pieces and crooks of three sizes.

4. The question of the rates remains to be considered.

5. At Moulmein there are fixed rates of duty per log upon all Teak timber, according to the locality from which it is brought. These rates I believe were adopted in 1848, and were fixed with reference to the actual collections of timber duty made in previous years, when a duty of 15 per cent. was taken on the timber valued at Rupees 14 per ton. The rates then adopted, and which are still in force, are :—

Timber from the Attaram River,Rs. 4 0 0 per log.

Ditto ditto Thoung-yeen River, Gyne, &c., 2 12 0 „

6. The rates proposed by Dr. McClelland, as given in his Table No. 3, although reduced by a subsequent Memorandum he has furnished me with, about one-half appear to me to be too high. I do not think the rates should be generally higher, certainly not very much higher than those which exist at Moulmein. I propose therefore, while adopting the general views of Dr. McClelland, to fix the rate of duty for Rangoon, by a standard approximating to that already adopted at Moulmein. Unless this is done, it will not, I conceive, be possible profitably to work the Forests in Pegu. The tariff rates, which I propose to adopt, are shown in Table A. annexed to this Memorandum.

7. Dr. McClelland proposes to issue a Notice (No. 1,) prohibiting any person from removing timber from the Forests without authority. This notice is very necessary. Previous orders have prohibited any person felling timber in the Forests. All felled timber, which had owners, may be presumed to have been removed, and it is now necessary to take measures for preserving that which remains from being taken away by persons having no right thereto.

8. Notice No. 2 announces the adoption of new rates of duty on timber, and defines the time when they are to take effect. Sufficient time is given to parties in possession of timber to bring it to the duty station, or to register it now for duty, before the new rules will come into operation. This notice also defines the limits of the Forests on the Rivers Hlaine, Phoungyees and Zemaye or the Pegu River.

9. There are now standing and felled on the Forests of the Hlaine, the Phoungyee and the Pegu Rivers 11,426 available trees, full-sized and under-sized.

10. The Superintendent recommends that tenders be invited for the bringing away of these, at an upset price of not less than Rupees 6 for full-sized timber of five feet girth and of not less than Rupees 3 for all timber under that size.

11. As however these prices were proposed with reference to the rate of duty in the tariff recommended by Dr. McClelland (*vide* paper No. 3,*) it will be necessary to lower the upset price, with reference to the reduced rate of duty to be hereafter placed upon the log. The upset prices I propose are as follows :—

For full-sized standing trees, killed and seasoned, each not less than Rupees 4.

Under-sized trees at half that rate.

The upset price paid by the contractor will be inclusive of all duty, but in the case of mast-pieces, yard pieces, &c. *i. e.* timber of forty feet and upwards in length, the upset price will be credited to the contractor, and the duty levied thereon at the new rates. It is here necessary to remark that the new rates of duty cannot be fully carried out at present, because there is a great quantity of under-sized timber standing in the Forests, which was killed before the British Government obtained possession of the Province. This is the reason why it is necessary to adopt an upset price inclusive of all duty for logs of less than forty feet length. But these logs will be liable to the inspection of the Timber Revenue Department, until “passed” at the timber duty stations.

(Signed) A. P. PHAYRE,

Commr. of Pegu and Agent to the Gov. Genl.

PEGU COMMISSIONER'S OFFICE ; }
Bassein,
The 18th May 1854. }

(True Copies.)

(Signed) A. P. PHAYRE,

Commr. of Pegu and Agent to the Gov. Genl.

* Appendix to the Report on the Southern Forests, Pegu.

A.

Statement exhibiting the amount of Duties that will be levied on Mast, Yard and Keel pieces, also on Spars and other Teak Timber in the Province of Pegu.

Length of Timber.	Duty for Running Foot.			Total amount of Duty on each piece.					
From 40 to 45 feet,	0	2	0	5	0	0	5	10	0
„ 46 to 50 „	0	2	3	6	7	6	7	0	6
„ 51 to 55 „	0	2	6	7	15	6	8	9	6
„ 56 to 60 „	0	3	0	10	8	0	11	4	0
„ 61 to 65 „	0	3	9	14	4	9	15	3	9
„ 66 to 70 „	0	4	9	19	9	6	20	12	6
„ 71 to 75 „	0	6	0	26	10	0	28	2	0
„ 76 to 80 „	0	7	6	35	10	0	37	8	0
„ 81 to 85 „	0	9	3	46	13	3	47	14	3
„ 86 to 90 „	0	11	3	60	7	6	63	4	6
„ 91 to 95 „	0	13	6	76	12	6	80	2	6
„ 96 to 100 „	1	0	0	96	0	0	100	0	0
Logs less than forty feet in length and not less than five feet in girth, each,	0	0	0	0	0	0	3	0	0
Crooks.									
Stem pieces, each,	0	0	0	0	0	0	0	9	0
Ship Crooks,	0	0	0	0	0	0	0	4	0
Boat ditto,	0	0	0	0	0	0	0	1	0
Small ditto,	0	0	0	0	0	0	0	0	6

(Signed) A. P. PHAYRE,

Commr. of Pegu and Agent to the Gov. Genl

PEGU COMM'R'S OFFICE;

Bassein,

The 18th May 1854.

No. 14.

FROM

J. McCLELLAND, Esquire,
Offg. Supt. of Forests, Pegu,

TO

CAPTAIN A. P. PHAYRE,
Commr. and Agent to the Gov. Genl., Pegu.

Dated the 23rd May 1854.

SIR,

IN continuation of my letter No. 82, dated 5th April 1854, I have the honor herewith to enclose the draft of a Public Notice, together with a Tabular Statement, exhibiting a detailed list of the various classes of Teak timber and the amount of duty to be levied on each.

2. I have been unable to ascertain, by any direct means, the actual market value of timber on Rangoon, further than the verbal statement of Mr. Berry, who informed me that it ranged from Rupees 45 to 46 per ton, which would give a scale of duty considerably higher than I have proposed, and out of all proportion with the rates charged at Moulmain.

3. The Table was therefore constructed from Mr. Seppings' Statements of the price of Teak timber in the Calcutta market, deducting 50 per cent. for freight, insurance, &c. &c., thus arriving at an approximate value of timber in the Rangoon market, and making it about Rupees 15 per ton less than it is stated to be by Mr. Berry.

4. I would therefore propose that this tariff be adopted for the approaching season.

I have, &c.,

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

The 23rd May 1854.

Dated the 23rd May 1854.

NOTICE is hereby given, that on and after this date, and until further orders, duty will be levied on the several classes of Teak timber, according to the following Table :—

Parties eluding the payment of duty will render their timber liable to confiscation.

(Signed)

J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

OFFG. SUPDT. OF FOREST'S OFFICE ; }
Rangoon, }
The 23rd May 1854. }

STATEMENT exhibiting the Classes of Timber which it is proposed to recognize and the Duty to be levied on each.

Description of Timber.	Length Averaging.			Moulded or Breadth Averaging.			Sided or Thickness.	Price.			Each or per Foot.	Amount of Value.			Amount of Duty.			REMARKS.	
	Feet.	Feet.	Inches.	Feet.	Inches.	Feet.		Inches.	Rs.	As.		Pie.	Rs.	As.	Pie.	Rs.	As.		Pie.
Teak, crooked, large,.....	18 to 20	1	6 to 1	4	1	1 to 1	3	20	0	0	each,	20	0	0	3	0	0		
Ditto ditto, middling,.....	15 " 20	1	3 " 1	2	0 10 "	1	0	12	8	0	—	12	8	0	1	14	0		
Ditto ditto, 3rd sort,.....	14 " 20	1	2 " 1	1	0 7 "	0	9	7	8	0	—	7	8	0	1	2	0		
Ditto ditto, boat timber,.....	0 " 0	0	0 " 0	0	0 0 "	0	0	3	0	0	—	3	0	0	0	7	2		
Ditto Keel pieces, large,.....	50 " 60	1	8 " 2	0	0 0 "	0	0	3	0	0	per foot	165	0	0	24	12	0		
Ditto ditto, small,.....	45 " 50	1	4 " 1	6	0 0 "	0	0	1	8	0	—	72	4	0	10	11	0		
Ditto Mast pieces, large,.....	65 " 80	1	10 " 1	6	0 0 "	0	0	3	0	0	—	362	8	0	54	6	0		
Ditto ditto, middling,.....	60 " 70	1	5 " 1	2	0 0 "	0	0	3	0	0	—	195	0	0	29	4	0		
Ditto ditto, small or Spars,.....	40 " 50	0	9 " 1	1	0 0 "	0	0	35	0	0	each,	35	0	0	5	4	0		
Ditto Logs, five feet girth at the bottom or upwards, any length under forty feet,.....	25 " 40	0	0 " 0	0	0 0 "	0	0	35	0	0	—	35	0	0	5	4	0		

(Signed)

J. McCLELLAND,

Offg. Supdt. of Forests, Pegu.

OFFG. SUPDT. OF FOREST'S OFFICE, }
The 23rd May 1854. }

(True Copies.)

(Signed) A. P. PHAYRE,

Commr. of Pegu and Agent to the Gov. Genl.

No. 17.

FROM

J. McCLELLAND, ESQUIRE,

Offg. Supt. of Forests, Pegu,

TO

CAPTAIN A. P. PHAYRE,

Commr. of Pegu and Agent to the Gov. Genl.

Dated the 29th May 1854.

SIR,

I HAVE the honor to acknowledge the receipt of your letter of the 18th instant, No. 6, enclosing a Memorandum and a Table of duty to be adopted, pending the sanction of the Supreme Government, and authorizing the publication of certain Notices, together with the details of the new tariff, as soon as possible.

2. I shall lose no time in publishing the necessary Notices, but with respect to that regarding the removal of felled timber, it will be necessary to refuse the admission of private claims to the felled timber on the Hlaing, Phoungyee and the Pegu (River) Forests, from the 1st January last, 1854, the date on which an inventory was taken of it on the part of Government, and for such timber in all other Forests from the date of this notice.

3. It will be sufficient, I trust, to refer to the new tariff, without at present publishing the details, until they shall have been further discussed and considered, for we appear to entertain opposite views on this point. By your striking the tariff at so low a rate as in Table A., it would seem that you looked to the immediate commercial interests of the Rangoon port and the Export trade in timber, whilst I look to the Forests from whence the trade is to be supplied, and give it as my opinion, that if your tariff were adopted, the trade of the port would eventually suffer with the ruin of the Forests, which would assuredly follow, though not perhaps in your time or in mine. Although you mention incidentally, in the first paragraph of your Memorandum, intended for the information of the Government, that I report the Teak Forests of Pegu to be of such great extent, &c., yet there is not a sentence in my Report that would lead to the impression that they are inexhaustible, but on the contrary that they are widely dispersed, and the timber they contain so thinly and sparingly diffused, as to demand great caution and economy

in every step connected with the Forest system that may be adopted in Pegu, to render the Forests perpetual, and to secure permanent supplies of timber from them, without endangering their exhaustion and total destruction. At no time is such caution more essential than at the present moment, when they are about to be opened the first time to British enterprize.

4. The duty on Teak timber at Moulmain is levied on a valuation of Rupees 15 per ton, which appears to have been assumed (though on what grounds is not stated) to be the valuation of the timber as it stands in the Forests, but if timber be of any value in the Forests, the amount must necessarily vary in different Forests, according to their distance from the nearest market, whether Rangoon or Moulmain, as the case may be.

5. It may be a question whether the duty should not be levied rather on the market value of the Province, which both in Rangoon and Moulmain varies, according to the best information I can obtain on the subject, from Rupees 45 to 46 per ton, which was the standard I proposed to frame the new tariff upon. These rates you considered too high. I then, with the intention of meeting your views upon the subject as far as possible, adopted Rupees 30 a ton as the standard, or about half the Calcutta price, which made the duty per log Rupees 5-11.

6. If this be considered too high, the simpler course would be to reduce the duty from 15 to 10 per cent., or even to 5 per cent. on the market value, rather than levy the higher rate (15 per cent.) on a low nominal Forest valuation, which bears no relation to the actual market price of timber.

7. You propose to assimilate the duty in Rangoon as far as possible to that which is in force at Moulmain, and to charge Rupees 3 a log, which is a little less, you observe, than the average rate adopted at the latter place, where mast pieces are included; but as these will be here separately charged the rates at both places, your remarks will be nearly equalized.

You will perceive, however, from the figured Statement No. 2 (annexed to my Report,) being a statement of timber passed at Rangoon during the last season, that masts, keel pieces and spars form but a small proportion of the timber brought into the market. Hence we should lose

more by the reduced rate on the great mass than would be recovered on a few rare pieces of timber, only occasionally met with as mast pieces.

8. For this reason I would prefer the simpler adoption of the Moulmain rates as they stand, to the modification proposed in your Memorandum, which would be attended with a loss of revenue, without an equivalent advantage.

9. The circumstance of mast pieces being excluded and charged in a separate scale, as proposed with respect to Pegu, should not, from their rarity, be allowed to affect the general rates, as they are never likely to constitute more than one-hundreth part of the produce of the Forests, and in those of Phoungyee and Pegu, large or even middle-sized mast pieces do not exist.

10. The graduated scale Table A., proposed for mast pieces, would be extremely inconvenient in practice, and from recognizing no less than twelve varieties of this rare description of timber, depending on the trivial difference of five feet in length, and without reference to girth, a native, without a measuring tape, could not tell you what description of timber his raft is composed of, while the old distinction of keel pieces, large, middle-sized and small mast pieces or yards are intelligible distinctions, quite numerous enough for practical purposes. It is an erroneous assumption that the Forests of Pegu contain any Teak of 100 feet in length, while the largest mast pieces included in Seppings' Table are 65 to 80.

11. With regard to crooks, provided they shall be the produce of branches, and thus under-sized timber be not sacrificed for them, I see no objection, on re-consideration of that point, to their being admitted at the Moulmain rates.

12. For the rest, I must still recommend, that the rates, as well as the Tabular form submitted with my letter to your address, No. 14, under date 23rd instant, be adopted in lieu of the rates, and form Table A. annexed to your Memorandum, dated the 15th instant, or at all events, I would very earnestly recommend, that the rates for Rangoon should not in any case be less than Rupees 4 per log for the timbers of the Hlaine and other Forests, except Phoungyee and Pegu, which may, by reason of its smaller growth, be admitted at the reduced rate of Rupees 2-12 the log, these being the duties now levied on Teak timber at Moulmain.

13. I beg that this letter may accompany my Report on the Teak Forests to the Supreme Government.

I have the honor to be, &c.,

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

SUPT. OF FOREST'S OFFICE ;

Rangoon,

The 29th May 1854.

(True Copy.)

(Signed) A. P. PHAYRE,
Commr. of Pegu and Agent to the Gov. Genl.

(TRUE COPY.)

No. 45.

FROM

J. McCLELLAND, ESQUIRE,
Offg. Supt. of Forests, Pegu,

TO

CAPTAIN A. P. PHAYRE,
Commr. of Pegu and Agent to the Gov. Genl.
Dated the 1st July 1854.

SIR,

I HAVE the honor herewith to submit a fair copy of Rules for admission of Teak timber, as modified by yourself, and which I think quite sufficient as temporary arrangements for the present season, until the inferior timber, which was marked or felled in the Burmese time, shall have been absorbed.

2. I learn upon the best authority, that the market value at Moulmain of the class of timber which alone I have contemplated in my Report (para. 36) as proper to admit into market, is now Rupees 50 per ton ; that it is there become extremely scarce ; and that in order to obtain such timber, merchants are obliged to purchase a large proportion of inferior timber, unfit for exportation.

3. I need not repeat in this place how much the stability and duration of the Forests, as well as the interests of the Export trade, will depend on the strict adherence to the principle advocated in the 36th

para. of the Report already adverted to, or remark how much both must depend upon the quality of the timber selected for cutting.

4. In future we shall have the selection entirely in our own hands, and although the number of logs annually brought away, under a strict principle of selection will necessarily be comparatively few, yet merchants will gladly pay 15 per cent. on the market value of first class timber, which, according to the present rate of timber, would be about Rupees 9-8 per log.

5. I would therefore propose that the Rules now submitted, fixing the duty at Rupees 4 a log, be published only as a temporary arrangement, not intended to extend beyond the present season.

I have, &c.,

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

The following Rules for the collection of Revenue on Teak Timber will have effect for timber not registered, according to the Notice dated the 30th May 1854:—

I.

The minimum girth of a log to be passed for duty will be five feet at the butt end. All logs and other description of timber that may be under five feet girth, and all timber converted from logs, which have not paid duty, will be liable to confiscation, except such as may come under Rules III. and VIII.

II.

The rate of duty on all logs of and above five feet girth is for the present fixed at Rupees 4.

III.

Crooks, the produce of branches, will be passed without reference to girth, at the following rates:—

	<i>Rs.</i>	<i>As.</i>	<i>P.</i>
Stern pieces,	0	9	0
Ship Crooks,	0	4	0
Boat ditto,	0	1	0
Small ditto,	0	0	6

IV.

Timber arriving from the Phoungyee and Pegu Forests, and from the Sitang River below the Youkthawah stream, to be taken to the Revenue Station, at the mouth of the Puzzeondoun Creek near Rangoon.

V.

Timber from the Tounghoo Forests, situated above the Youkthawah stream, to be declared for duty at Tounghoo.

VI.

Timber arriving by the Hlaine and Irrawaddy Rivers to be taken to the Kamendine Revenue Station.

VII.

Timber required for local purposes, any where above the Timber Revenue Stations, can only be purchased after sanction by the Deputy or Assistant Commissioner of the District within which the timber is situated, on application made to them, or either of them, by the seller and intended purchaser. Such application will state the number of logs for sale, and will be countersigned by the Forest Assistant of the District, who will certify the amount of duty due thereon. Such duty will be paid into the local treasury before the sale is sanctioned.

VIII.

Foreign timber of any size, when brought within the British Territory, on the Northern Frontier, will be measured and duty levied according to its cubical contents, under the orders of the Collector of Inland Customs at the rate of 15 per cent, valued at Rupees 14 per ton. Such timber will receive a pass from the Collector of Customs on the Frontier, to enable the owners to bring it down. Should any of the timber be sold before reaching Rangoon, application must be made to the nearest Assistant in the Forest Department, to have the transactions endorsed on the back of the pass.

IX.

All foreign timber found in transit, without a pass, will be liable to confiscation.

X.

The arrival of rafts at the Kamendine and Puzzeondoun stations, together with a description of the timber and the number of logs of which they consist, to be reported at the Superintendent's Office within twenty-four hours of the date of their arrival.

XI.

No rafts, after being reported, to be removed, without payment of the duty under penalty of confiscation.

XII.

Rafts, when passed and the duty paid, to be removed from the station within four days, under a fine of one anna per log for each day's delay in their removal, after that period.

XIII.

Timber passing the Revenue stations at the mouth of the Pazeondoun creek and at Kamendine, without being reported and passed by the Superintendent, or Officer in charge of the Timber Revenue Office, is liable to confiscation.

XIV.

All timber which may have drifted past any Timber Revenue station, without having been passed for duty, is, under all circumstances, in the possession of whatsoever party, liable in the first instance to the demands of Government on account of revenue duty, and seized and confiscated accordingly, in default of the immediate payment of such duty.

XV.

Parties into whose hands drift timber may fall, are to make it over to the Officer in charge of the Timber Revenue Office at Rangoon, or to the nearest Thoogyee or other Civil Officers, who will report the same to the Deputy Commissioner of the District, for the information of the Superintendent of Forests. The Superintendent will adjust any claims for salvage there may be on the timber.

XVI.

Drift timber made over under Rule XV. will be advertised by the Officer in charge of the Timber Revenue Office, in the District where it has been found, and a period of fifteen days allowed from the date of

such advertisements, for parties to claim the same, after which period no claims will be admitted, and the timber will be confiscated and sold.

By Order of the Commissioner,

(Signed) J. McCLELLAND,

Offg. Supdt. of Forests, Pegu.

OFFICE OF THE SUPT. OF
FORESTS, PEGU; *Rangoon,* }
The 6th July 1854.

(True Copy.)

(Signed) J. McCLELLAND,

Offg. Supdt. of Forests, Pegu.

(True Copies.)

(Signed) A. P. PHAYRE,

Commr. of Pegu and Agent to the Gov. Genl.

(COPY.)

No. 2753.

FROM

THE SECRETARY TO THE GOVERNMENT OF INDIA,

TO

THE COMMISSIONER OF PEGU.

Dated Fort William, the 3rd August 1855.

FOREIGN DEPARTMENT.

SIR,

I HAVE received and laid before the President in Council your letter, dated 24th July 1854, No. 4, submitting a copy of Dr. McClelland's Report on the Southern Teak Forests of Pegu, and soliciting sanction to the arrangements which have been made for the collection of the timber revenue.

2. Having given the subject treated of in these papers his best consideration, His Honor in Council desires me now to observe in reply, that the Report of the Superintendent affords much valuable information and contains many useful recommendations, but the system proposed to be adopted is so imperfectly described in your letter, that His Honor in Council has found it somewhat difficult to understand exactly what it is proposed to do. The two distinct elements of duty and price are so mixed up together, that His Honor in Council cannot but suspect

that both Dr. McClelland and yourself have not seen the full force of the principle which was laid down by Government at the annexation as the ruling principle of the whole subject, namely, that the Teak timber should be retained as State property.

3. Your letter, His Honor in Council observes, does not explain the whole case. It would be inferred from it, that there was but one class of timber in question, which is intended to be treated all in the same manner. But a perusal of the voluminous papers enclosed has shown that there are three classes of timber—*first*, timber cut and lying at places outside the Forests, that is to say, timber which had become private property at the time of annexation, but had not yet been brought all the way to market; *secondly*, timber cut or killed, but still in the Forest, which is public property, and from which the wants of the market are first to be supplied; *thirdly*, growing timber.

4. The Rules dated 6th July 1854, which you have put into operation, subject to confirmation, apply only to timber of the first class, which is private property, and for which it is quite right to charge not a *price*, but a duty. With these Rules His Honor in Council will not interfere, as the timber to which they are applicable is now probably exhausted, but I am desired to request that, if you see no reason to the contrary, they may be cancelled, now that they have been more than a year in force, and that a notice may be issued to the effect, that all timber hereafter found between the Forests and the Revenue stations without a pass will be seized as public property.

5. The Rules under which timber of the second and third classes is to be purchased, and paid for, and floated to market, can only be found by reference to a proposed Notification, prepared by Dr. McClelland, and dated the 4th of May 1854; and by a comparison thereof with your Memo. of the 18th of May 1854, whereby certain alterations therein were ordered to be made, and by a further comparison with a certain Notification dated the 1st of June 1852, and a certain "new tariff" of duties, neither of which documents are with the papers now submitted.

6. It seems to the President in Council, that the mixing up of "duty" and "price," which the proposed system involves, causes a very needless complication of matters, and is contrary to the original orders of Government. Indeed, His Honor in Council does not see with what propriety, now that the system of transit duties is generally exploded,

any "duty" at all can be levied, as a permanent source of revenue, on timber which, by fair purchase, has become private property. It may be very necessary to stop and examine, at particular stations, all timber which is in transit, in order that all timber found without a pass, certifying that such timber has been duly purchased and paid for, may be seized ; but the levy at those stations, or any where else, of a "duty" exclusive of the purchase price (as is proposed for mast pieces) is contrary to the original order of the Governor General in Council, whilst the levy of such a duty, inclusive of the purchase price, (as is proposed for common logs,) seems to be an objectless proceeding. It will be, in fact, taking one thing under two names.

7. It was an omission on your part not to furnish the Government with a copy of the complete Notification and Rules as finally determined upon. Dr. McClelland was called upon by your memorandum above cited to embody the Rules resolved upon in "a set of Regulations embracing every necessary point to be observed by parties bringing down timber, on the general plan of those adopted at Moulmein." But no such set of Regulations has been forwarded to Government, neither is there any where any estimate given of the average cost of bringing timber to market. This is the most important element in the calculations to be made ; for of course the difference between this cost and the market price is the value of the wood as it stands in the Forest ; I am therefore directed to call upon you to supply these omissions, and at the same time to draw your attention to the consideration, that Rules, which like the Moulmein Rules, were framed for the imposition of a "duty" upon native and foreign timber, chiefly private property, can hardly be applicable to timber which is wholly the property of the State, and which it has been determined shall be made saleable for a price which is to include all duty—in other words, which is to free it from all liability to duty.

8. The plan which you propose to introduce as a permanent arrangement, as far as can be gathered from the numerous papers that had to be referred to, is for the Superintendent of Forests annually to mark and kill (by ringing) the trees which are to be felled the next year in each Forest. No other trees are to be felled. The right to bring the whole of the marked trees of any one Forest from the Forest to market is to be annually sold "to approved purchasers," who are to tender for the

same before hand. A minimum price of Rupees 6 a log, without regard to the size of the logs, is to be insisted upon. One-third of this price is to be paid immediately, and another third is to be paid before the timber can get to market. When these "approved" purchasers bring down their logs, they are to stop at certain Revenue stations, where they are to pay a duty of Rupees 3 a log, also without regard to size. For mast pieces this duty is to be paid over and above the price; for spars and common logs this duty is to be allowed for in the price.

9. This appears to the President in Council a cumbrous system, and one which at the same time is not likely to give the public treasury the full value of the public property sold, or to ensure those traders a supply of timber who want it most, unless they happen to be great capitalists and speculators in timber. The persons at Rangoon, who procure timber from the Forests, do not go to the Forests themselves and cut the timber, or drag it to the water, or float it to market, by men hired by themselves. They enter into contracts for all this work with some of a particular class of people, who make it their business to labor in this manner. There seems no reason why the Superintendent of Forests, after marking and killing the trees to be felled, should not make similar contracts with the same people, give to each contractor a pass for the number of trees he contracts for, and so collect the timber at the Rangoon market, and there sell it, not to a few *approved* purchasers, but in moderate lots, to the highest bidder, at periodical public auctions. This method, His Honor in Council believes, would prevent sub-monopolies and collusion between a few capitalists, for there will be few merchants in Rangoon able to buy in advance the whole annual crop of a large Forest. It will ensure the Rangoon timber market (a subject of great complaint at present) being a free and open market to all, without favor to any; it will also make the smuggling of stolen or under-sized timber easy of prevention; for the only people allowed to cut in the Forest will have no interest in cutting more than they contract for.

10. A perusal of paras. 31, 32 and 33 of Dr. McClelland's Report has satisfied His Honor in Council, that the only way to prevent the appropriation of trees without paying for them, and to prevent the destruction of under-sized and half-grown timber, without wasting the branches of large felled trees, (under which name, if allowed, the stems of

young trees might be passed,) is not to allow a purchaser to enter the Forest, or to have any concern in felling the wood or bringing it away. The only check provided by the proposed system, for the prevention of the practice of appropriating timber without paying for it, is the charge of a so-called duty of so much a log to be levied at certain stations on the river; but it is clear that this will not prevent the felling of unmarked trees, and the appropriation of the timber, without paying the full price for it.

11. With advertence to the question of the rate of "duty," upon which there is a difference of opinion between Dr. McClelland and yourself, His Honor in Council has a few remarks to offer. You reduce the rates proposed by Dr. McClelland by one-half, on the ground, that at such high rates, the Forests could not be worked at a profit, and that such charges on timber would destroy Rangoon as a ship-building port. You however adduce no proof in support of this assertion. • At first sight, it seems not very probable, that the Superintendent of Forests would propose a rate of duty so high as to make the produce of his Forests valueless; and from what is known of the high market value of Teak timber at Rangoon, it is difficult to imagine it possible, that a duty of Rupees 8 on a tree of five feet girth and upwards, which is estimated as equal to 15 per cent. *ad valorem*, would operate as a prohibitory tax. It is understood that Teak sells readily at Rangoon, for from Rupees 40 to Rupees 50 a ton, and the average measurement of trees of such a girth as five feet must be very great. The value of a spar is estimated at Rupees 75, and that of a log at Rupees 51 or 52. Although His Honor in Council cannot think that Dr. McClelland's rate of duty would have the supposed effect, yet he admits that an excessive rate of duty would have that effect. The plan of auction sale which has been alluded to could not possibly have that effect, and herein such a plan has a manifest advantage over any system of fixed duty or fixed price. The timber at auction will sell for what it is worth, but no more; and though it were given away by Government to an "approved purchaser" at only a nominal fixed price or duty, the ship-owner would have to pay for his ship according to the actual worth of the timber in it, not according to what the Government may have got for that timber. In fact it is the price that the ship-owner will give for the ship, and the necessary limit to the annual supply of timber, that will regulate the actual worth of the timber; and any dif-

ference between that amount and the prime cost will be the profit, neither of the purchasers, nor of the builders (as such) of ships, but of the timber speculators only. The excessive profit of these speculators at Moulmein has had indirectly a very bad effect upon the progress of the Tenasserim Provinces, for it has attracted the capital and energies of the whole mercantile community there to this one speculation only.

12. With reference to the foregoing observations, the President in Council requests that you will report again on this important subject; in the meanwhile the arrangements made by you are approved and confirmed by His Honor in Council as temporary arrangements.

I have the honor to be, &c.,

(Signed) CECIL BEADON,

Secy. to the Govt. of India

FORT WILLIAM, }
The 3rd August 1855. }

(COPY.)

GOVERNMENT NO. 148 OF 1855.

FROM

MAJOR A. P. PHAYRE,

Commr. of Pegu and Agent to the Gov. Genl.,

TO

CECIL BEADON, ESQUIRE,

Secy. to the Govt. of India,

Offg. Foreign Department,

Fort William.

Dated on the River Irrawaddy, near Prome,

The 4th August 1855.

No. 6, FORESTS.

SIR,

I HAVE the honor to submit in original a Report on the Sitang and other Teak Forests of the Province of Pegu, drawn up by the

Officiating Superintendent of Forests, Dr. J. McClelland, and transmitted with his letter No. 429, dated the 27th June 1855. A map is also forwarded, exhibiting the position of the several Forests now described, as well as those reported on in letter No. 82, dated 5th April 1854, which accompanied my letter No. 4, dated 24th July 1854, to the Secretary to the Government of India.

2. Dr. McClelland's former Report included the Southern Forests, that is, those situated on the feeders of the Hlaine, Phoungyee and Pegu streams, which fall into the Rangoon River. The present Report refers to Forests lying to the North of those streams, and on the main ridge and spurs of the Yoma, a chain of hills which divides the waters of the Irrawaddy and Sitang Rivers. A portion of the Forests East of the Sitang have also been visited and reported on; the Forests West of the Irrawaddy, on the spurs of the Arrakan mountains, have yet to be visited.

3. In the first forty paragraphs of this interesting Report, Dr. McClelland describes the physical geography of the country, the localities of the several Teak Forests, the soil and situation which the tree best thrives in, and the various kinds of Forest trees associated with it.

4. In paras. 44 and 45, Dr. McClelland discusses the question which has been felt as a difficulty in the Tenasserim Forests, namely, the efficient protection of young trees from destructive agencies, and the extension of Forests by planting. He appears to consider that the expense of planting and protecting young trees would be greater than the value of the timber to be derived from such a system, while the risk of loss from various causes would be considerable. He observes that teak is found to grow in clusters somewhat widely apart from each other. There is no want of natural seedlings, and he recommends that a portion of these young trees should be transplanted to suitable adjoining localities. This can be effected by means of a small number of laborers being employed temporarily for a few weeks of each year, under the present establishment. The Superintendent also recommends that rewards be paid to those Goung-Gwais or subordinate Forest Officers, who keep their Forests in the best order and do most for their extension. This I consider a very good principle, and beg to recommend it for the favorable consideration of the Hon'ble the President in Council.

5. In paras. 47 and 48 of his Report, Dr. McClelland refers to the destructive agency of fires in injuring the Forests, and in describing the hill cultivation, carried on by Kareens, Yabines, and also some Burmans, proposes that the latter at least should be prohibited having recourse to such a method of cultivation. This cultivation consists in clearing away the Forest from a hill-side and allowing the trees to remain as cut down, until they are thoroughly dried by the heat of the sun. The whole mass is then set fire to, whereby the ground is cleared and the ashes fertilize the soil. The proposition to prevent Burmese following this method of cultivation is equivalent to proposing to drive all those settled in the hills down into the plains, and would be a harsh, if not a cruel measure. The Kareens have been settled in the hills from time immemorial; there they have their native home; so have the Yabines, who, Dr. McClelland does not seem to be aware, are the same in race as the Burmese. The name is given to those who live in the higher hills and breed silk-worms. In the lower hills also, and on the high lands adjoining, large numbers of Burmese are settled for the purpose of growing cotton, the great staple of the whole of the high lands in the Tharawaddy, Prome and Mecaday districts. To prohibit Toungya or hill cultivation, therefore, would at once deprive a large number of people of their means of subsistence; and to tell them to change their mode of life with their country, to descend to the plains and cultivate paddy land, without ploughs and without bullocks, would be a cruel mockery. At the same time the Teak Forests must be protected as much as possible, and there are wide tracts of hill country available for Toungya, without interfering with the Teak trees; but the utter want of forethought hitherto, and the general waste of Teak, as lately reported on by me in a previous despatch,* has undoubtedly made the peasantry utterly regardless of the value of Teak trees, so that to make a hill plantation a fine Teak tree would, without scruple, be felled and burned on the ground. What I propose is, that all the village authorities in the neighbourhood of the Teak Forests be enjoined to prevent, as far as possible, the destruction of Teak trees, by the formation of hill plantations, and that the Forest Department subordinates be desired to report every instance of such destruction which comes to their

knowledge. By this means the practice of destroying Teak trees may no doubt be very materially checked, and in time prevented; but with these rude tribes it will be a difficult task to stop the practice of ages in a matter where prohibition appears to them quite unaccountable. Dr. McClelland however apparently considers that the Burmese go into the hills against the "dictates of nature and reason," expressly to cut down Teak. The plain fact is, that numbers of them have been settled in the mountain districts for generations, attracted by the profitable sale of the cotton and silk they raise there. Cotton grows best in the hill soil. The food of the silk-worm (mulberry) can also be best raised in the hill and up-lands, hence it is only grown there, and the worms are not bred in the low country. The rice raised by the people in the hills may be viewed simply as food for the cotton and silk-growers, and not as the great object of hill cultivation, as Dr. McClelland, in his 48th para. appears to suppose. It is evident, therefore, that when growing rice in the hills, they do not disobey the voice of nature and reason, while to expel them from their houses would be contrary to the dictates of justice.

6. With reference to the proposition contained in the latter portion of para. 49 of the Report, recommending that the dimensions at which a Teak tree should be felled should be fixed by Act of the Legislative Council, I do not think this will be required. The Rules which I had the honor to submit with my letter No. 4, dated 24th July 1854, provide for all timber under five feet girth being confiscated, and if necessary, in addition to confiscation, fines might be inflicted under authority of Government on parties felling under-sized timber in the Forests.

7. Dr. McClelland, in para. 51 of his Report, quotes the Notification added in the margin,

Notice is hereby given that all the Forests in the Province of Pegu being the property of Government, any person who shall cut, mark or fell any Teak timber in any of those Forests without authority, will be liable to be apprehended and prosecuted according to law.

All timber which has been cut in the Government Forests, from the commencement of the present year, or which may hereafter be cut without license, will be liable to confiscation.

Rangoon, 26th September 1853.

and appears to consider, that it was not intended therein to recognize the right of any person to *felled* timber in the Forest.

This view is clearly untenable from the words of the Notice itself. It was known that persons had the right of property in felled timber lying in the Forests, and the object of the Notice of the 26th September 1853 was to give more extended notice than had been done formerly, to all persons, that Teak timber, if felled without license in the Forests of Pegu,

since the Province became British, was liable to confiscation. The terms "cut" or "mark" referred to the practice of persons cutting out old Forest marks on trees standing, and adding their own, whereby the tree could not be recognized, or to persons removing marks from felled timber, whereby the owners could not recognize it. Dr. McClelland quotes from a letter of mine to his address, dated the 30th of November 1853, in which I observe that it is desirable to render certain killed and felled trees available for the timber market, as confirming his interpretation of the Notice above quoted. But those trees which I there referred to were situated in the Phoungyee Forests, comparatively close to Rangoon. The owners had had full opportunity since annexation to bring away their timber, and what remained in the Forest it was fair to conclude had no owners remaining in the country. Such timber would therefore, as a matter of course, fall to Government. I in consequence directed it to be counted and advertized for sale on Government account. But this referred to particular trees in a particular Forest, and not, as Dr. McClelland supposes somewhat strangely, to all felled trees in the Province. On the 30th of May 1854, Dr. McClelland published a Notification, rendering liable to confiscation all timber removed from the Southern Forests since the 1st of the preceding January. Previous to my being aware that this Notification had been published, I addressed Dr. McClelland a letter, copy* of which is annexed, No. 18, dated 18th June 1854, from Bassein,

* Marked No. 1.

where I then was, and I subsequently directed him to cancel that portion of the above Notification, on the ground that we had tacitly allowed people to remove their felled timber, and had given no previous notice that permission to do so would be withdrawn on the 1st of January 1854. Dr. McClelland's Notification would have made it incumbent on the Timber Revenue Department to search for timber in Rangoon and elsewhere, brought away during the previous five months, when people had received no notice that they were forbidden to do so. I considered this unjust, and therefore refused to sanction it.

8. Although the time had come (May 1854,) when, without injustice, further ingress to the Southern Forests might be prohibited, yet, as the Forests of the Tharawaddy District had been closed by the disturbed state of the country from the time of annexation, I deemed it to be expedient when the people of that district began to be orderly, to extend the period within which parties might bring away their timber

from those Forests to the end of the year 1855. My reasons for this were, as well with reference to the rights of owners of felled timber, who were more numerous than was at first supposed, and which it was only just to acknowledge, as also to the desirableness in the case of the Tharawaddy district, of giving employment to her turbulent population, and of avoiding creating amongst them a ferment which the loss of their timber would be sure to produce. I therefore addressed Dr. McClelland a letter, No. 67, dated the 3rd November 1854, of which I beg to annex a copy.* The Notice then

* Marked No. 2.

issued gave to parties owning felled timber in the Tharawaddy and Toungoo Forests, up to the 1st January 1856, to bring it away. The reasons for extending the provisions of this Notice to the Toungoo Forests, are given in the said letter, and subsequent information has justified what I then advanced as to a quantity of felled timber, belonging to private parties, being in existence in those Forests. Dr. McClelland remarks, that on hearing his objections, I cancelled the order as far as regarded Forests situated in the Sitang Valley, South of Toungoo. That is the case, because Dr. McClelland assured me his information led him to believe there was very little if any felled timber remaining in the Forests South of Toungoo. I did not therefore apply the Notice to that tract of country. On reaching Toungoo, however, I found a number of people who owned felled timber in the Kaboung Forests, South of Toungoo, in great consternation at the prospect of losing it, and I therefore felt it to be only an act of justice to put it to the test, whether the timber was old or new, as directed in para. 6 of my letter to the Officiating Superintendent of Forests, No. 10, dated 20th March 1855, a copy of which is given in the Appendix to Dr. McClelland's Report.

9. Dr. McClelland remarks (para. 52,) that if the order of the 3rd of November 1854 had been withheld, compensation might have been made to those who were deprived of timber rather than interrupt for twelve months the introduction of a regular system. But in a lately disturbed District like Tharawaddy, with the people shy and suspicious, it would have been utterly impossible to find the owners during the few weeks that Dr. McClelland was able to devote to that tract of country. The attempt therefore to make compensation to owners would have been confiscation under another name. The injustice committed would have been great and the discontent boundless. In the same manner Dr. McClelland's objection to owners of old felled timber being allowed

to cut it up in the Forests would, if adopted and carried out, also lead to confiscation, since the owners have not now the means of removing it in large sizes. The Revenue Rule, which places a duty of Rupees 4 a log on all timber, irrespective of its size, is a sufficient check on people cutting it up, except where a reduction of size is necessary in order to remove it. How Dr. McClelland is led to state, that permission to cut old timber into short lengths makes the prohibition against felling timber a dead letter, I cannot understand, as he has always told me in reply to numerous complaints on the subject of seizures of timber in Rangoon as being green, that nothing was more certain than the detection of fresh felled timber by the appearance of the fibre of the wood, where the outer surface was shaved off at the cutting. The terms "cutting, marking or felling" timber, quoted by Dr. McClelland in this paragraph, were as I had before explained, introduced into the Notice in order to prevent persons removing Forest marks from timber, whereby it becomes not distinguishable by its owner. It was designed to prevent a man who owned a large log, but had not elephants to drag it away, cutting it up into small lengths, whereby it could be dragged, as has heretofore been the custom, with buffaloes. To give a man a nominal leave to take away his timber, and then prevent him using the only means by which he could remove it, would be an unworthy deception. The permission for people who owned timber to take it away necessarily implied taking it away in any manner convenient to them.

10. In para. 53 the Officiating Superintendent states, that on arrival at Toungoo, on the 10th February last, he found nearly all the timber collected for the erection of the barracks at that station to be newly cut. I understand this term to mean "newly felled," and I think from subsequent evidence, that Dr. McClelland has been mistaken in his conclusions. The Superintendent complains that timber was being felled for the Barrack Department under the authority of Mr. O'Riley, the Assistant Commissioner of Toungoo, by a Kareen Chief, named La Quay, and others. I beg to annex copies of letters and statements as noted in the

4.
 No. 3, Memo. by Mr. O'Riley, dated 12th March 1855.
 „ 4, Letter from Assistant Commissioner, Toungoo, to
 Commissioner of Pegu, No 47, dated 15th March 1855.
 „ 5, The same to the same, No. 53, dated 21st March,
 with Statement annexed.
 „ 6, Statement of Moung Shnay Nga, Nga Kyee, and
 John Pearce, taken on the 24th March 1855.

margin, from which it appears clearly, that Mr. O'Riley did not give orders for trees to be felled, and the Kareen La Quay both

denies having felled any or having admitted he did. He states he only cut up old timber into short lengths. As Dr. McClelland is not acquainted with the Burmese language, I think it not improbable that what La Quay said has been mis-interpreted to him. It is evident also from the statement of John Pearce, the Overseer of Sawyers in the Executive Engineer's yard, at the very time Dr. McClelland was at Toungoo, that out of two or three hundred logs sawn up under his orders, only four were green logs. The statement of La Quay, that what he furnished were old logs, is therefore generally speaking borne out. In speaking of felling and cutting timber, the latter word, even in English, bears a doubtful meaning, being sometimes used to signify felling timber, *vide* para. 53, where Dr. McClelland speaks of "newly cut" timber, evidently meaning "newly felled," and sometimes cutting felled timber into short lengths, and sometimes cutting or shaving away the marks put on the surface of timber. The whole of the circumstances connected with the Teak Forests in the Toungoo district were commented on by me in my letter to the Superintendent, No. 10, dated the 20th March, which was written amidst the Teak Forests of the Kabang stream. A copy of that letter is included in the Appendix A. to Dr. McClelland's Report, and I beg to refer to it for my explanation of the orders referred to in para. 53 of the Report.

11. In para. 54, Dr. McClelland states what he proposes for the future preservation of the Forests of Pegu. His plan is—

1st.—To allow of no Teak in public buildings.

2nd.—To render Teak timber throughout the Province contraband, *i. e.*, not to be owned or used by any private person.

3rd.—To reserve all timber in the Forests for naval purposes.

The last involves a question on which I do not feel competent to give an opinion. It resolves itself into, whether it will be considered more advantageous in a national point of view, to reserve all Teak timber for the Admiralty, and to dispose only of what they reject, or to let the public purchase the timber from Government as usual, and for the Navy to be supplied from the market. On the one hand, it is of great importance that the best timber should be secured for the Navy, and on the other, making Teak timber a contraband article, may materially interfere with the industry of the Province generally, and particularly to commerce

and ship-building of Rangoon. Dr. McClelland's remarks on the desirableness of other kinds of timber being used in public buildings are well worthy of consideration. It is very certain that the Forests of Pegu contain several kinds of timber well suited for building, but I cannot agree, that prohibiting the use of Teak altogether is necessary in order to preserve the Forests, after the 1st of January 1856. With the help of the Goung-gwais, whose qualifications Dr. McClelland has described in para. 42 of the Report, and a strict surveillance over timber at the Duty station near Rangoon, it appears to me that the Forests ought, with ordinary vigilance, be well preserved. By the present plan the Goung-gwais deliver a list of the number of killed trees within a given tract of Forest. Parties are invited to tender for the purchase, felling and carrying away of those trees. The trees are then floated down to Rangoon by the contractors, and the logs remain liable to confiscation, (if there is any thing regarding them inconsistent with the Forest or Timber Revenue Rules), until they have been passed at the Timber Duty station. The trees already sold in the Southern Forests consisted of full-sized and under-sized trees, killed in the Burmese time. They were sold inclusive of duty, as from the great number of under-sized logs among them, Rupees 4 would have been too high, and this plan prevented any confusion arising from different rates of duty. But hereafter only full-sized trees will be sold, which will be liable to duty of Rupees 4 a log all round. If the contractors are properly watched by the Forest Department, they cannot cut any trees but those pointed out to them, and it will be the duty of the Forest Department only to point out such trees as are full-sized and killed. Another method of disposing of the trees for the season in each Forest would be, instead of selling them standing in the Forest, to have them felled and brought down to Rangoon on the Government account by contractors, and there to hold periodical sales of timber. By this method, as the timber would be in the Government possession, until a transfer of it was made by sale, (and the price should then, to simplify the transaction, include all duty,) I think the Forests would be preserved as effectually as possible, short of declaring Teak timber contraband.* It would be for future consideration to determine whether sales should only be held at Rangoon, or whether a limited quantity might be sold at

* I may add, that as long as timber is admitted from the Burmese territory, I do not see how it can be declared contraband.

Toungoo or Prome. This plan would give the public an opportunity of purchasing timber, or if it be considered necessary to reserve a portion of the best timber for naval purposes, such quantity as might be allotted for public sale would alone be put up.

12. With reference to the remarks on the tariff contained in para. 56, of the Report, I have only to repeat the opinion I expressed in para. 3 of my letter, No. 4, dated 24th July 1854, that the duty on timber at Rangoon should not be generally higher, or at all events much higher than that existing at Moulmein. Dr. McClelland now proposes that the rates of duty should be 15 per cent. on the Rangoon market value. I have no objection to this, if a similar rate is imposed at Moulmein. But Dr. McClelland assumes that the Moulmein rates, as they were imposed in 1848, are to be regarded merely in the light of inland duties on Foreign timber. This is an error as respects the timber from the Attaram River, the duty on which is the same as that placed on the Pegu timber, namely Rupees 4 a log, and the whole of that timber grows in British Territory.

13. In para. 56 of the Report, the Superintendent also remarks, that the average rates obtained on the sale of seasoned timber in the Southern Forests of Pegu, on the 30th May 1854, nearly correspond with the rate of duty proposed by him in para. 36 of his Report, dated the 5th April 1854, namely, Rupees 7-10-5 per log. But it must be remembered, that the rates paid by the contractors to the Government above referred to, and as shown in Statement No. 3 appended to the Report, consisted of two items, the price of the log and the duty thereon. As then the average amount for full-sized logs in the Forest paid to Government in this instance was Rupees 6-9-9 each, including both of the above items, it is evident that the amount of duty per log (Rupees 7-10-5) proposed by Dr. McClelland far exceeded the value of the log in the Forest. I think then it evidently was too high a rate, at all events at present, and with reference to existing rates at Moulmein. The rate would, in short, have prevented any profitable dealing in timber.

14. I am disposed to agree with Dr. McClelland, should Government not think proper to reserve the whole of the timber for sale at stated periods, that a re-adjustment of the rates of duty on the market value of timber at Rangoon and Moulmein will be advisable. This I say with reference to the establishments which will probably be found necessary

to preserve the Forests, and perhaps hereafter to extend them by systematic planting. Should any change be made in the existing tariff, a notice, of the nature of that referred to in the latter part of para. 58 of the Report, would be necessary.

15. The receipts on account of timber revenue for the year 1854-55, referred to in para. 59 of the Report, and the details of which are given in Statements 3, 4 and 5, will I trust be considered satisfactory. No. 3 shows the number of standing trees in the Southern Forests sold to contractors. These consisted for the most part of small-sized trees killed

Full-sized,	2,702	during the Burmese time. The proportions are
Under-sized,	9,810	shown in the margin. The amount realized by
Total,	<u>12,512</u>	the sale was Rupees 33,400-8-0. The contractors

however have not been able to bring away the trees within the time specified, which was six months from the date of sale. Being convinced that this breach of agreement resulted from causes over which the contractors had no control, namely, the paucity of labor and difficulty of procuring elephants; and further, that no other contractors were likely to succeed better, I have extended the period allowed to them to the 1st of January 1856, and trust this will be approved. The amount hitherto received on this account is Rupees 7,517-8-0, and the Government have the disposal of the timber in case the remainder is not paid. In Statement No. 4 is shown the amount sale of confiscated and unclaimed timber, amounting to Rupees 1,838-13-2, and in Statement No. 5 the amount of duty realized on timber brought down, being Rupees 18,204-0-7. This is the amount paid on timber felled during the Burmese time, and lying in the Forests belonging to individuals.

16. In para. 60, Dr. McClelland describes the arrangements made by him for providing supplies of full-grown timber in future years by girdling the trees; and a detailed Statement is given in Return No. 6, showing that 8,056 full-sized trees have thus been prepared for felling.

17. Dr. McClelland concludes his Report with some interesting and useful remarks regarding lines of road through the Province, and has added a highly valuable list of the principal trees found in the Forests of Pegu, with remarks on the practical uses to which the timber, the flowers, or the fruit, may be turned.

18. I cannot conclude my remarks on this Report without recording, that though I differ from Dr. McClelland as to the means proper to be taken in order to preserve the Teak Forest of Pegu, I have witnessed with admiration, when travelling with him, through a considerable portion of those Forests, the zeal with which he investigated every thing connected with the subject; while the ability with which he has performed his task of portraying the physical character of the Forests, and the geological formation on which they depend, as well as solving the intricate question of the means to be adopted for the propagation of the Teak plant, is abundantly evident from his Report; in addition to which the general information given regarding Forest trees, their products and uses, is exceedingly valuable. Dr. McClelland has lately resigned his appointment, wishing I believe to proceed to England on furlough. I could have wished he had remained to complete his tour through these Forests West of the Irrawaddy, still unvisited. His departure will be a great loss to the Forest Department in Pegu.

19. I have transmitted the Report and its enclosures in original, and I respectfully request that copies may be made of the whole and transmitted to me.

I have the honor to be, &c.,

(Signed) A. P. PHAYRE,

Commr. of Pegu and Agent to the Gov. Genl.

PEGU COMM'R'S OFFICE;
On board the *Irrawaddy River*, near *Prome*, }
The 4th August 1855.

(COPY.)

No. 429.

To

MAJOR PHAYRE,

Commr. and Gov. General's Agent, Pegu.

FOREST.

SIR,

I HAVE the honor herewith to submit my Report on the Northern Forests of Pegu, together with a map of the whole of the Forests described in this, as well as in my former Report, on a scale of eight miles to an inch. This map, essential to the Report, is submitted in duplicate.

2. I believe I have referred in the body of the Report to the principal points that require to be brought under notice, regarding the present condition and management of the Forests.

3. I have thought it necessary to append to my Report the correspondence marked A., which took place in March last, relative to the removal of timber from the Tounghoo Forests, as intimately connected with the question of Forest conservancy.

4. In the mean time I would suggest that strict orders be communicated to the Assistant Commissioner at Tounghoo, to abstain from all connection with the removal of timber from the Forests. I offer this suggestion with reference to the Assistant Commissioner's recent proposal to you, that he be permitted to supply timber from the Kabaug Forests for the barracks at Shoaygeen. You will perceive from the 27th and 55th paras. of my Report, that this object may be provided for without at all indenting on the Teak Forests; but I object from principle to the Assistant Commissioner's connection, in any way, with the supply of timber, especially as he is the only authority on the spot, to adjudicate in cases arising out of breaches of Forest Rules.

I have the honor to be, &c.,

(Signed) J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

RANGOON, }
June 27th 1855. }

REPORT ON THE SITANG AND OTHER TEAK FORESTS OF PEGU.

THE Teak Forests now about to be described occupy the Districts at the head of the Nawing and Hlaine Rivers, together with the borders of the Sitang Valley.

2. The general aspect of the Teak Forests is hilly. The hills which lie between the Irrawaddy and the Sitang are from 800 to 1,200 feet in height along the centre of the chain, which is called the Yomah. The Yomah hills are steep and abrupt in their declivities, and are more difficult of access from this cause than might be expected from their low elevation. They extend South from the Northern boundary line to within sixty or eighty miles of Rangoon, having the Sitang Valley to the East and the Hlaine and Nawing to the West. The Southern termination to the chain is marked by the river valleys of Thoungzai,

Oakkan, Phoungyee and Pegu, described in my Report on the Southern Forests.

3. The Yomali hills throughout their whole extent are composed of slate clay and argillaceous sand-stone, in alternating beds, passing into each other. These rocks are generally soft and friable, affording a fine light grey-colored loose and dry soil, in some places hard and stiff; but the rock is sometimes hard and basaltic, and where this occurs, it yields a dark brown soil. There is a dry sub-soil of sand and small fragments of slate mixed together.

4. The plains at the Eastern foot of the Yomali range, forming the West side of the Sitang Valley, are about one hundred miles in length and twenty in breadth, composed throughout their whole extent of laterite, which is generally buried beneath beds of sand; but occasionally displacing these, it appears at the surface, forming broad undulations of dry ground, raised a few feet above the level of the surrounding plain and covered with long grass and stunted trees. These plains are subject to occasional inundations, in some parts rising (by the water mark on the trees) to four or five feet, and are covered with Forests, except probably about one-fifth of the whole area, which may be about the proportion of available land under rice cultivation; but this proportion might be greatly increased by the ground being cleared.

5. The mountains called Paulong-loung, on the East side of the Sitang Valley, are much higher than the Yomali, the nearest elevations of the range (distant about twenty miles from Tounghoo) being upwards of 3,000 feet. They are composed of gneiss or a soft kind of granite, covered at their foot with laterite, which composes the low hills and undulating ground extending to the banks of the Sitang. The lower parts between the hills and higher undulations of laterite are composed of fine grey sandy soil. There are likewise on this side of the Tounghoo Valley some broad alluvial plains, extending along the numerous small streams falling towards the Sitang. The whole of the lower hills and plains are covered with Forests, except such parts of the latter as can be made available for rice cultivation, which may be about one-tenth part of the district on this side of the Sitang, all the rest being waste Forests and incapable of any kind of cultivation.

6. Throughout the Sitang Valley there is no scarcity of water, even in the hot season. Small natural lakes occur, together with some low

marshy tract, which never quite dry up, the soil therefore retains its moisture and vegetation, its green appearance at all seasons. These peculiarities may be ascribed in part to the presence of laterite under the soil, which prevents the loss of water by leakage or absorption, and in part also to the very low level of the country. But to whatever cause it may be due, the circumstance is in itself important.

7. During the rainy season, the lower plains throughout the Prome and Tharawaddy districts are subject to partial inundation, but when the rains are over, the water rapidly dries up, and the surface everywhere becomes parched, except in the lower parts of the Tharawaddy district, where the soil retains, during the dry season, something of the moisture of the Sitang Valley, but with this exception, all the Western slopes of the Yomah range and the plains at their foot become dry and parched.

8. The streams descending from the Western slopes of the Yomah hills are the Nawing and Kyouk-than Rivers, or as they are called, Choungs. The Nawing falls into the Irrawaddy at Prome, the Kyouk-than descends to the South through the Tharawaddy district, running nearly parallel with the Irrawaddy for seventy or eighty miles to the Lahakyin swamp, where it changes its name from Kyouk-than to the Hlaine River, and continues its course under the latter name to Rangoon. The Hlaine is a considerable stream, navigable for 150 miles in the rainy season, and to Tsanway at all seasons.

9. The Nawing dries up immediately the rains are over, and rises again as rapidly after the first heavy fall at their commencement. It rises in the hills North-east of Prome, by means of four principal branches, namely, the Northern Nawing, the Chong-zouk, the Middle Nawing, and lastly, the Southern Nawing, which are all dry sandy ravines for six months of the year.

10. The Kyouk-than or Hlaine receives nine principal tributaries from the Western slopes of the Yomah hills, extending for a distance of 100 miles throughout the whole of the Tharawaddy and lower part of the Prome district. These tributaries are all dry, or only contain pools of green stagnant water, for four or five months in the year. During the rains they are all capable of floating timber.

11. In the lower part of the Sitang Valley, situated in the Pegu district, there are three streams descending from the Eastern slopes of

the Yomah hills to the Sitang River, namely, the Kawleaya, Binedah and Yainwai. These streams enter the Sitang River a little below Shoaygeen, and drain what is called the Bohnee district. The two first unite a little before their junction with the Sitang, and are much obstructed with sands at their communication with the main river, so as to impede their course and render it difficult to drag timber from them into the Sitang without great labour.

12. Crossing the plains of the Tounghoo district on the West bank of the Sitang are four large streams falling from the Eastern slope of the Yomah hills into the Sitang; namely, the Koon, the Phyo, and the Khab-boung below Tounghoo, and the Swah River north of that place, together with three smaller streams, namely, the Myottla and Dounglangya, above the Swah River, and near the Northern boundary of the province, and the Bauloung, a small stream south of Tounghoo, which enters the Sitang a little below the Phyo.

13. The streams in the Sitang Valley are all of considerable size, and never dry up like those of the Prome and Tharawaddy districts, but have clear running water in them throughout the dry season. Those which descend from the Yomah hills carry down with them into the valley such quantities of earthy matter as to form along their winding course to the Sitang high borders of silt or sediment, which are so much raised above the general levels of the adjacent parts of the valley, as to be free from inundations, to which the lower grounds are periodically subject. These high borders of the streams are the sites of some of the best Teak Forests.

14. The lowest Teak Forests in the Sitang Valley are situated in that portion of the Pegu district called Bohnee. These Forests are confined to certain localities in the different parts of that district, watered by the Kawleaya, Binedah and Yainwai Choungs.

15. On the Kawleaya Choung, within a circuit of two or three miles of the village Kwai-byewme, there are about 1,000 Teak trees growing scattered in all directions without forming a Forest, but apparently like other common trees. A small Forest occurs on the north of the village, consisting of about 200 Teak trees, mingled with others. On the east of the village, there is another small Forest about half a mile off the river, consisting also of about 200 Teak trees mixed with others, the Teak forming about 50 per cent. of the whole Forest. The country

about Kwai-byewme has been no doubt cleared by the Kareen and Yaibane population, to make way for the cultivation of rice and mulberry, which may account for the Teak being so scattered. About ten miles lower down the Kawleaya a more extensive Forest occurs, occupying several small hills on both sides of the stream, and extending South as far as the village of Kyouk-tu-lone, about three miles distant. The largest trees were however confined to the vicinity of the hills near the banks of the stream. The soil throughout these Forests, on the Kawleaya, is a light grey sandy dry soil resting in slaty rock. *Careya arborea*, *Melicocca trijuga*, *Barringtonia*, *Millingtonia* and *Dillenia* were the most abundant trees with which the Teak is here associated.

16. On the Binedah Choung, Forests occur at intervals along the high borders of its course, commencing about two miles above the village of Binedah. The soil is the usual dark grey sandy soil of the Teak Forests, forming a deep deposit of 10 feet in thickness, resting on laterite. The breadth of the Forest is only about five or six hundred yards in some places, in others it is broader, and extends for some miles along the banks of the stream, Teak forming probably 50 per cent. of the trees composing the Forests. There were a number of felled and killed trees found in these Forests, some of the felled trees were partially decayed by age, and on enquiry, it appeared that these Forests had not been worked for a period of ten years, owing to the obstruction at the confluence of the Choung with the Sitang.

17. On the Yainwai Choung Teak Forests are found both above and below the village of Kyin-quotear. The best Forests are above the village. Below the village the trees seen were small and too much crowded with other trees; but after crossing some low ground above the village, covered with sugar-cane or *Saccharum sarra*, a very fine Forest appeared; many of the trees were of full size, with the usual large proportion of seedlings and under-sized trees. I observed, however, that this Forest presented no appearance of having been worked recently, owing to the same cause as that which prevents the working of the Binedah and Kawleaya Forests, namely, the obstruction of the Choung at its confluence with the Sitang. A high ridge of silt, thrown up by the cross current of the Sitang, intercepts the course of all the Choungs in the Bohnee district, rendering the removal of timber more or less difficult

across this barrier. Annexed is a Return * showing the number of green trees, together with the quantity of seasoned timber in the Bohnce Forests.

* *Vide* Tabular Statements Nos. 1 and 2.

18. The *Tounghoo Forests*, west of the Sitang, are situated on the Koon, Phyo, Baulong, Khaboung, Swah, Myo Hla, and Doung-laungya Choungs. Some of these Forests are confined to the borders of these streams in the lower plains, and some of them extend up into the Yomah hills, occupying the narrow ridges and slopes of some of the lower heights.

19. The *Lower Koon, or Anambow Forests*.—The Forests commence on the Koon Choung, near the village of Thanapinzaik, about midway between the confluence of the Cloung with the Sitang and the foot of the hills. This part of the valley consists of beds of sand resting on laterite, and where it is not cultivated, the low ground free from Forest is covered with wild sugar-cane. The Forests consist of *Dalbergia*, *Barringtonia*, *Acacia Serissa*, *Bombax*, &c. The water-mark on the trunks of the trees show the Forests are liable to inundation. But on slight elevations composed of a sandy soil Teak is found; at first the trees are small, but on pursuing the course of the stream towards the hills, very fine timber is seen growing on the high sandy borders of the stream, along with other fine timber, as *Pentaptera*, *Inga* and *Melicocca*, an occasional wood-oil tree, and *Blackwellia*, a tall tree, with light colored smooth bark, that is never absent from the Teak Forests. This is the Anambow Teak Forest, which extends at intervals for about eight miles along the Koon to the foot of the hills.

20. The *Upper Koon Forests*.—At the foot of the hills the Koon Forests commence near the village of Yoebin, and are found on low ranges of hills composed of a sandy kind of slate clay; occasionally the laterite of the valley rises a short distance on the foot of the outer hills, but soon disappears on their abrupt declivities, to the evident improvement of the Teak timber. The ordinary soft slaty rock of the hills then appears, and above this the ridge is crowned with a narrow belt of Teak, together with the other trees with which it is usually associated, except the wood-oil tree, which is confined to the dry alluvial banks of the lower streams. In the Forests on the Koon there

* *Vide* Tabular Statements Nos. 1 and 2.

is a due proportion of seedlings and young trees. The annexed Return* shows the quantity of Teak timber in the Anambow and Koon Forests.

21. The *Phyoo Forests*.—The only Forests on this Choung are situated near the falls. The Forests below the falls have been very much worked. They are situated on low hills, at the base of the Yomah range, lying close to the bank of the stream, about two miles from the village of Minlan, and extend from thence for the space of three or four miles to the falls. The Forests were here at one time extensive, but are now much exhausted. Above the falls, where the Forests have not been worked, there is a large quantity of Teak timber. The Teak here grows on the same kind of slaty rock, covered with the same rich but light sandy soil as in the Koon Forests. Annexed is a Statement* of Teak timber in the Forests on the Phyoo Choung.

* *Vide* Tabular Statements Nos. 1 and 2.

22. The *Bauloung Forests*.—The Bauloung Choung takes its rise in some low ground situated between the Phyoo and Koon Choungs. On the banks of this Choung a small Forest is situated in alluvial soil, similar to that of the Anambow Forest, on the lower part of the Koon. The Forest extends from the banks of the Bauloung, nearly to those of the Phyoo Choung, about three or four miles distant, and to within six miles of the Sitang. From its close vicinity to the Sitang, and the convenience with which timber may be carried away, this Forest has been greatly over-worked. Annexed is a Statement* showing the quantity of Teak timber in the Bauloung Forests.

* *Vide* Tabular Statements Nos. 1 and 2.

23. The *Khaboung Forests*.—There are no Teak Forests on the banks of this Choung after it reaches the plains below Tabekway, nor on the small laterite hills in the immediate vicinity of that place; but about three miles West of this village Teak trees begin to appear on the summits of the low hills on the North bank of the stream, and continue at intervals for four or five miles to Thabyaywah, on approaching which place occasional Teak trees are found on both sides. The most numerous trees composing the Forests are *Inga*, *Pentaptera* and Teak, nearly in the order they are here given; after these come *Semicarpus*, *Nauclea*, *Egla* and *Cedrella Taona*. *Strichnos* is so plentiful in the Forests on this stream, as a large tree, as to give its name to the stream itself, Khaboung being the Burmese name of *Strichnos nuxvomica*. Teak continues to occupy a second or third place in the Forests for several days' journey up to the source of the stream. At

the pass between Tounghoo and Prome, occasionally appearing on the narrow ridges to the exclusion of most other trees, except *Inga* and *Pentaptera*. The soil is here the same as that of the higher Koon and Phyo Forests, namely, a light grey sandy, but rich soil, resting upon and passing into slate clay of a sandy structure and friable consistence. There appears to be no falls in the streams, so as to impede the removal of timber from these Forests. The annexed Statement*

* *Vide Tabular Statements Nos. 1 and 2.* shows the quantity of Teak timber contained in the Khaboung Forests.

24. *The Swah Forests.*—The Forests in this Choung commence on the North bank at the village of Amatkyeeekhon, to the West of which there is a low ridge, consisting of a river sediment, thirty or forty feet in thickness resting on laterite, and some fifty feet or so at its highest part above the level of the plains. Along this ridge or high bank, which follows the course of the Choung, and is occasionally intersected by it, some fine Teak trees occur in straggling clumps, each tree being surrounded by numerous seedlings, wherever there is sufficient open space for them to grow free from shade. The Forests on the North side of the Choung follow the borders of its tributaries, which drain the low, but undulating plains, to the foot of the Yadabo hills, about nine miles distant. Throughout this tract, Teak is found scattered about more or less on the higher ground. The belt of Forest, occupied at intervals by Teak, along the main Choung, is on an average half a mile broad, in some places more and in some less. Intervals of two or three miles occur without Teak, followed by a succession of small Forests or patches, where Teak is the prevailing tree, for a similar space of two or three miles; and in this way the Forest extends for several days' journey along the banks of the Choung. Between the villages of Yamasay and Woongay small round flat hills of laterite protrude through the soil, on which stunted scraggy trees of *Dipterocarpus alatus*, *Buchanania*, *Shorea* and *Rondeletia tinctoria* were found, but no Teak, although the latter of large size grows on the light sedimentary soil at their foot. On the South bank of the Choung a similar chain of small Forests are found to that described on the North bank, extending from the village of Yamasay to the banks of the Sitang, a distance of about twelve miles. Although these Forests have been heavily worked, they still contain a large quantity of Teak timber. The soil, rich and

light, of a grey colour and fine dry sandy nature, with a very deep subsoil of fine sand and silt resting on laterite, which lies at the depth of twenty to thirty feet and more beneath the surface. But above the village of Woongay, along the course of the stream towards the Yomah range, the soil becomes the same as that observed in the Forests at the head of the Khaboung. The trees associated with Teak in the Swah Forests are *Inga xylocarpa*, *Pentaptera glabra*, *Terminalia chebula*, *Careya arborea*, *Strichnos*, *Tectona*, *Hamiltonia*, *Nauclea cordifolia*, &c. The annexed Statement* shows the quantity of Teak timber in the Swah Forests.

* *Vide* Tabular Statements Nos. 1 and 2.

Careya arborea, *Strichnos*, *Tectona*, *Hamiltonia*, *Nauclea cordifolia*, &c. The annexed Statement* shows the quantity of Teak timber in the Swah Forests.

25. Above the Swah Forests, on the same side of the valley, are two small Choungs, the Myo Hla and Dounglangya, which fall into the Sitang from the low hills situated at the Eastern foot of the Yomah range. A Statement* of Teak timber contained in the Forests on these Choungs is annexed.

* *Vide* Tabular Statements Nos. 1 and 2.

Yomah range. A Statement* of Teak timber contained in the Forests on these Choungs is annexed.

26. The *Tounghoo Forests*, east of the Sitang, are situated in the small branching and winding valleys of the Youthawah, Thoutyaygat, Kanonee, Kayni or Kareen, Koonoung, Gwaithai, and Burbyai Choungs, descending from the Paulong-loung mountains.

27. The Youthawah Choung forms the Southern boundary of that part of the province east of the Sitang, and separates it from Martaban. The valley at its exit towards the Sitang forms for a few miles broad plains partially cultivated; these plains are open towards the Sitang, but enclosed to the east by broad low hills composed of laterite, with Forests of *Dipterocarpus alatus* and *Melanorrhæa usitata*. The Teak Forests are situated in the valleys beyond these hills, where the soil is composed of sediment washed down from the hills. The Teak commences at the distance of eight or ten miles from the Sitang and is widely dispersed throughout these valleys, growing along with *Pymmah*, *Melicocca*, *Careya*, and other trees, with which it is usually associated. The Forests extend eastward, along the course of these narrow valleys, to a distance of sixteen miles from the Sitang, branching off in various directions. The Teak Forests extend in a northerly direction to the village of Maubalan, about eight miles from the Youthawah, where they are sometimes called the Maubalan Forests, but these last are usually understood by the Burmese to form a part of the Youthawah Forests. The finest

Pymmah in the province is found between Youthawah and Maubalan, but it could not be taken up against the stream to Tounghoo : it might however be made available at Shoaygeen for the construction of public

* *Vide* Tabular Statements Nos. 1 and 2.

buildings in lieu of Teak. A Statement* of Teak timber contained in the Forests on the Youthawah Choung is annexed.

28. The *Thoutyaygat Forests* are situated in the valleys of the Thoutyaygat Choung, a stream of considerable size rising within the Paulong-loung mountains. The Teak Forests are confined to the valleys lying between the small hills at the foot of the mountains ; they commence at the village of Phrah, six miles South-east of Tounghoo, and extend from thence along the valleys on both sides of the hills to Thaya-ba village, about six miles from Phrah. Throughout these valleys Teak is found growing in a light dry sandy but rich soil, washed down from the neighbouring hills. The higher hills are composed of soft granite, the lower of laterite. The trees found with Teak in this Forest are *Shorea robusta*, *Melicocca trijuga*, *Walsura piscidia*, *Pentaptera* and *Inga*.

* *Vide* Tabular Statements Nos. 1 and 2.

These are all very plentiful and afford excellent timber. A Statement* of Teak timber found in these Forests is annexed.

29. The *Kannee Forests*.—The valley in which these Forests lie are separated from Thoutyaygat Valley by broad rounded arid hills of laterite, with Forests of *Dipterocarpus alatus*, *Melanorrhoea* and *Diosphyros melanoxylon*. Descending into the Kannee Valley, Teak of large growth is found along with *Saul*, *Inga*, *Melicocca* and *Pentaptera* of great size, the three last extend to the banks of the Sitang, while the *Teak* and *Saul* extend up the course of the valley, still attended by the other trees already mentioned, as well as *Macroclina Hookerii*, *Cedrela Toona*, *Odina wodier* and *Bassia* sp. The Kannee Forests commence at about the distance of five or six miles from the Sitang, not far from the village of Kannee, and extend to the eastward along the course of the valleys of the Choung and its branches. The soil is, as before,

* *Vide* Tabular Statements Nos. 1 and 2.

rich alluvium, resting on laterite. A Statement* of Teak timber contained in the Forests on the Kannee Choung is annexed.

30. The *Kaym or Karcen Forests*.—These are situated in a valley of the same name about eight miles north of Kannee. The two valleys

are separated by similar low hills of laterite to those already described, having in addition to the trees already noticed *Gardenia longispina*, *G. dumetorum* and *G. costata*. The Teak Forests lie to the east of the village of Kareen and extend from thence along the valley confined to the alluvial soil. The other trees found with Teak are *Shorea*, *Pentaptera*, *Melicocca* and *Inga*, the three last of gigantic growth, extending to the banks of the Sitang. A Statement* of the Teak timber in the Kaym Forests is annexed.

* *Vide* Tabular Statements Nos. 1 and 2.

31. The *Koon-oug Forests*.—These Forests extend along the course of the valleys of the Koon-oug and its tributaries for ten or twelve miles from the Sitang. The South side of the valley is formed by a low ridge of granite, extending from the mountains on the east, at the head of the valley, to within a few miles of the Sitang ; while the northern side of the valley is formed of broad undulating hills of laterite, which likewise ramify through the middle of the valley. The laterite is covered with *Dipterocarpus alatus*, *Melanorrhœa*, *Diospyros*, *Rondeletia tinctoria*, *R. paniculata* and *Gardenia*, together with *Acacia catechu*. The granite hills do not present much difference from the vegetation of the valley. In them was seen *Callicarpa arborea*, *Strichnos*, *Menispermum cordifolium*, *Cissampelos pilosus*, *Cissus*. In the valleys and alluvial flats between the hills and along the course of the streams, Teak is found, together with two species of *Pentaptera*, *Melicocca*, *Walsura* and *Shorea* as before. These Forests until recently extended down the delta of the valley to the Sitang, but have been cleared away to make room for rice cultivation, for which such alluvial soil is valuable, for a distance of about four miles from the Sitang. Scarcely any Teak is now left standing west of the village Tuyouk, and even beyond this much has been felled at the requisition of the Assistant Commissioner of Tounghoo, for the supply of timber for the new barracks and other public buildings at that place. The Thogyee or chief native officer of the District informed me that he had himself felled 300 logs, which he made over to the Assistant Commissioner, who still wanted as much more as he could get. The Thogyee stated that he knew the felling of timber to be contrary to orders, but he considered the requisition of the Assistant Commissioner sufficient to justify him in what he had done. In consequence of this unfortunate irregularity, I

have been unable as yet to obtain an inventory of the quantity of timber in this Forest, the Goung-gwai of Koon-oug having absconded on my entering that District. But I conclude the quantity to be equal to that of the Kayim Forests, or about 9,000 trees.* The people in the district were unable to understand the consistency of orders prohibitory of felling timber, while the Assistant Commissioner was ready to purchase any timber that was brought to him.

The circumstances above referred to, connected with the felling of timber, in the Koon-oug and other Forests, for the construction of public buildings at Tounghoo, were brought to the notice of the Commissioner in March last. The correspondence marked A. is annexed to this Report.

32. Two small Forests are situated above Koon-oug and below Maihow, the Northern frontier of the Province. These are situated on the Gwaythai and Binbyai Choungs, but do not contain between them 2,000 trees.

33. That part of the valley of the Irrawaddy, where the Teak Forests lie, differs from the Tounghoo Valley in one important geological feature, which exercises a considerable influence over the Forests, namely, the want of that uniform layer of dense impervious clay called laterite, covered with beds of alluvium, which peculiarity has the effect of preserving an uniform moisture of the soil at all seasons. In the Prome and Tharrawaddy Forests there are no deep beds of sandy deposit to modify, by their absorption at the surface, the excessive saturation of the soil during the rains, and no lower basin of clay to hold a supply of water during the dry season. The rains commence in May and last until October, during which period the flat plains of the Prome and Tharrawaddy districts, composed of slate clay, are soft and marshy, after which they gradually dry up, when the surface becomes hard, and contracted, forming large fissures, so as to render it difficult to travel over the country without the risk of breaking your legs at every step.

34. For this reason the Teak tree, which requires a light dry soil, is seldom found forming Forests in the plains of the Prome and Tharrawaddy districts, as it does on the beds of alluvium in the Sitang Valley. The Prome and Tharrawaddy Forests are therefore confined to the slopes and lower ridges of the Yomah hills. The finest Forests were situated in the

valleys at the foot of the hills bordering the plains ; but these are now wholly exhausted, or as I at first supposed, wantonly destroyed, so that it is necessary to penetrate a distance of ten or fifteen miles into the hills before reaching the Forests containing available timber. The exhaustion of the lower Forests is not altogether occasioned by the removal of timber, but is also due to a peculiar manufacture for which Prome has always been noted. In every Burman house there is what is called an oke or round wooden tray or dish painted with red varnish, supported on a round pedestal, neatly turned and carved, upon which the family repast, generally rice, is served up. These okes when complete have a conical lid, somewhat of the shape of a pagoda. These okes are all made of the best description of Teak—the largest timber is felled for them, and although a large log would probably make one hundred of them, the manufacturers are satisfied with a few chopped at intervals out of the log, the remainder of which is left as useless in the Forest. The next party who require okes fell fresh trees for the purpose, newly cut timber being preferred, and thus the waste of timber for this purpose is quite incredible. But this is not all ; the byat or roughly-shaped dish is formed in the Forest, where many are rejected for the least flaw or unsoundness, which renders them useless—these, together with the chips and rejected timber, serve as fuel for the destruction of the young trees, especially seedlings, thus effectually preventing the restoration of the Forests where this practice prevails.

35. The *Nawing Forests* are situated on the tributaries of the Nawing Choung, each large tributary having its own Forests ; but these are so much alike, that a description of one may serve for all.

The Forests on the Northern tributary commence at one period as low down as Pouktaw, but the Forests along the principal branch, from whence the timber could be dragged into the stream with the smallest amount of labour, are exhausted for a distance of thirty miles within the hills. There is still, however, some fine Teak at the sources of the small lateral tributaries, commencing at Nga Moayzeen, and extending upwards to Singoung, and Tahyan villages, beyond which the Forests have not been as yet worked, even on the main branches of the Choung.

36. On the Choungzouk, as high as Payininjai village, and in the middle Nawing, as high as Toungbyouk village, the Forests are for the most part exhausted, but above the last-mentioned village there still remain consi-

derable Forests, as well as on the Southern branch of the Nawing above Tounglai. On the Shoaylai Choung, as high as the village of Tounzainouk, the Forests are quite exhausted, but considerable Forests exist at the head of this Choung and its tributaries in the Shoaylai district.

37. The quantity of timber contained in these Forests will be found in the annexed * figured abstract, which embraces all the principal Forests of the Prome district.

* *Vide* Tabular Statements Nos. 1 and 2.

The soil of the Forests on the Northern Nawing is black or dark-brown, owing to the basaltic nature of the rocks in that quarter, but in all the other Forests of the Prome district, it is the same light grey sandy but rich soil already described. The rocks on which the soil rests is the ordinary kind of slate clay, of which the Yomah hills are composed.

38. The various kinds of trees associated with Teak in the Prome Forests are here enumerated in the order of their numerical proportion :—1, *Acacia catechu*; 2, *Odina wodier*; 3, *Pentaptera*; 4, *Spondias acuminata*; 5, *Nauclea*; 6, *Inga*; 7, *Tectona grandis*; 8, *Careya arborea*, 9, *Terminalia*; 10, *Shorea robusta*; 11, *Walsura piscidium*; 12, *Strichnos*; 13, *Conocarpus robusta*; 14, *Hymenodictyon parviflora*; 15, *Bursera serrata*; 16, *Kydia*; 17, *Dipterocarpus alatus*; 18, *Blackwellia*; 19, *Hopea odorata*; 20, *Pterocarpus dalbergioides*; 21, *Hyenia*, 22, *Melicocca trijuga*.

Thus of twenty-two kinds of trees enumerated in the order of the numerical proportion in which they enter into the composition of the Prome Forests, Teak holds the seventh place. In other words, there are six other kinds of trees more numerous within the limits of these Teak Forests than Teak itself.

Acacia catechu probably forms 40 per cent. of the whole trees in the Forests; *Odina wodier* 10 per cent.; *Pentaptera* and *Spondias acuminata* 5 per cent. each; *Nauclea* and *Inga* about 4 per cent. each; *Tectona*, *Careya arborea* and *Terminalia* 2 per cent. each; the remaining thirteen may be put down as bearing the proportion of 1 per cent. each, leaving 13 per cent. to be made up of other species, such as *Barringtonia acutangula*, *Acacia serissa*, *Galedupha arborea*, *Mimosa octandra*, *Erythrina*, *Dalbergia*, *Bombax*, and *Xanthoxylon alatum*, which are found in low grounds only.

39. The *Tharawaddy Forests*.—These Forests are situated on the *Tounguyo*, *Sinchoung*, *Nimboo* and *Myolah Choungs*, which are regarded as tributaries of the *Kouk-than* stream ; on the *Htoo*, *Mimbla*, and *Mokekha Choungs*, which are tributaries of the *Lahakin*, or lake, which occupies a low marshy tract in the middle of the *Tharawaddy* district, and on the *Beling Choung*, which is a tributary of the *Hlaine River*. But the *Kouk-than* and the *Hlaine* are one and the same stream, which extends from the *Nawing*, near *Prome*, to *Rangoon*, under different names, in different parts of its course. It might indeed be regarded as one of the mouths of the *Irrawaddy* rather than a distinct stream, since it has several communications with that river during the rains by means of creeks, although it occupies in the upper part of its course a distinct valley formed by the *Prome Hills*. It receives all the streams falling from the Western slopes of the *Yomah hills* from *Prome* to *Rangoon*, and consequently forms the principal channel by which the timber, from the Forests of adjacent districts, is brought into *Rangoon*. In that part of its course which lies in the *Prome* district, it is called the *Tah Choung*.

40. The *Tounguyo Forest* is the best of those on the tributaries of the *Kouk-than* stream. Teak trees of small size appear about the village of *Singondine*, and from thence scattered trees and small Forests are found at long intervals, for several days' journey along the course of the *Choung* into the hills. In consequence of the unsettled state of this part of the district, even in the *Burmese* time, and the remote situation of the Forests, very little timber has hitherto been brought away from them in the log, it has been felled only for oaks and in clearing the ground for hill cultivation

The *Sinchoung Forest* is situated near *Tahpoo* on low ground, and containing few trees.

The *Minboo Forests* commence at *Zeegone* village, where small Teak trees are found, and extend from thence into the hills. Teak is found at intervals on both sides of the *Choung*, extending for a considerable distance into the hills.

The Forests on this *Choung* have been but little worked, and as yet they have only furnished keel pieces.

The *Myohla Forests* commence about three miles from the confluence of the *Choung* with the *Kouk-than*. The trees are very widely dispersed,

and in consequence of the distance the timber has to be dragged, it is generally split into shinbyns or rough planks.

The four forests above described, called collectively by the Burmese the *Kouk-than Forests*, are situated in the northern part of the Tharawaddy district, where the people have at all times been lawless and idle. The Forests have in consequence been very little worked.

The Forests occupy the borders of the plains extending along the foot of the hills, and the banks of the Choungs near the hills, as in the Tounghoo district.

The trees with which the Teak is associated are *Nauclea*, *Odina* and *Acacia catechu* (the latter of diminished size and number as compared with the Promo Forests,) *Inga*, *Pentaptera* and *Melicocca* as before, together with *Cassia Sumatrana*, and in the plains *Careya*, *Barringtonia*, *Dalbergia*, *Bignonia*. The wood-apple, mango, tamarind, jack and palmyra are cultivated near villages. In the plains the soil is a heavy clay, in the higher grounds towards the hills it is a light dry soil of grey colour.

41. The *Htoo Forest*. Teak is found in this Forest within six miles of the Lahakin, and extends from thence into the hills, a distance of twenty miles, dispersed in small Forests, which improve in quantity and size of the timber to the East of the Wyne village.

It is from this Forest bees' wax is generally supplied, and fires, which are very frequent here, are ascribed to the practice of smoking the bees out of their nest, for which purpose fire is required and gives rise to accidents. Minhla is a smaller Forest than the last, commencing within a few miles of Lahakin. It has been very much worked, and is now exhausted for twelve miles, and two or three miles in breadth, on either side of the Choung as far as Tshaiyoah village. Above this village there is a considerable quantity of timber.

The *Mokelha Forest* extends from Tshinñe village, about one and a half miles from Lahakin, but is nearly exhausted of timber for sixteen miles along the course of the Choung, and for some miles in breadth on either side.

Beling.—This Forest begins at Leppardan village, but is exhausted of large timber as far as the rapids, or for a distance of several miles in breadth on either side of the Choung and twenty in length; but above

the rapids, which afford little impediment, there is still a large quantity of fine timber.

The annexed Return* shows the quantity of growing timber contained in the Tharawaddy Forests. The four last men-

* *Vide* Tabular Statements Nos 1 and 2.

tioned Forests are those which have been worked to great extent, especially the Beling, the Mokekha and the Mindla, being those which lie nearest to Rangoon and from which timber can be most conveniently brought into market. Like all the Forests they are subject to much injury from fire, but notwithstanding which there is no deficiency of young trees, which is to be ascribed to the general moisture of the climate and the low marshy nature of the plains over which the westerly winds pass, which preserves to a certain extent the verdure of the Forests during the dry season.

42. With regard to the Returns of the quantity of timber contained in the Forests, and the degree of confidence to be placed in their accuracy, I may state, that it has always been a rule with me to visit each Forest before calling for a return of the timber it contained. This gave me an opportunity, not only of forming my own opinion of the value of the Forest, but also of selecting the most eligible person from amongst the nearest inhabitants of the place to fill the situation of Goung-gwai or local agent. This appointment has always been made after sufficient experience, on the spot, of the zeal and local information of the person selected, together with the most satisfactory assurance, that he is in no way connected with timber, or any other business that could interfere with the discharge of his duties. A written appointment is then made out, in which all the duties of a Goung-gwai are explained in detail, and amongst others, the method to be followed in making out an inventory, for the accuracy of which the Goung-gwai holds himself responsible. Instances of dishonesty on the part of Goung-gwais are very rare, and quite unknown, where due precaution is taken in their selection. Of twenty-seven Goung-gwais employed one is a Kareen, two Yaibaynes, and twenty-four Burmans.

The Goung-gwai, with the natural instinct of a Burman for finding out Teak timber, added to a local knowledge of his native Forests, has no difficulty, in the course of a few weeks, in ascertaining the place of every tree above a certain size within his circle, a task which, to a stranger would be nearly impossible.

The inventory of trees from four feet girth and upwards is taken with comparative ease, but that of the under-sized timber, of eighteen inches to four feet girth, is more difficult ; and for the few Forests in which it has been accomplished, it appears to bear the ratio of about two of the smaller trees for one of the next larger size, except in the Phoungyee Forests, where the proportion in favor of the smaller trees was three to one, according to which ratio I have assumed the proportion of smaller trees in those Forests where the inventories were deficient in regard to them.

The unsettled state of the Tharawaddy district, and the want of a resident population in the Forests, has up to this time prevented the appointment of Goung-gwais to some Forests, the duties of which are provided for by an excellent Goung, a native of the district, aided by peons.

43. Teak is a tree of rapid growth when placed in a favorable soil. The first year the seedling attains the height of twelve inches, throwing out two large leaves ; the second year it springs up to the height of three or four feet, after which it goes on increasing rapidly and bears seed in the eighth year of its growth, when it has attained the height of twenty-five feet and upwards. It is for the first four or five years, while the young plants are liable to suffocation from long grass and bamboos, that cultivation would be most requisite until the young trees secured possession of the ground. After that all that would be necessary would be to protect the Forests from fire and the unlicensed use of the axe.

The lengthened period ascribed to the growth of Teak, by writers on the Moulmein Forests, was owing to their having been guided in their calculation by the number of what are called annual rings, exhibited by a section of the trunk. But Mr. Griffith, who is the best authority on questions of this nature, states that in tropical climates, where the alternations of seasons is less marked than in Europe, no dependence is to be placed in this test of the age of trees.

Teak may however be retarded in its growth like any other tree, by unsuitable soil and other unfavorable circumstances, as the want of sun, light and due ventilation, to say nothing of accidents by fire, which may injure the young tree and thus retard its growth without destroying it, producing however an indefinite number of annual rings. Where no accidents of this nature occur, I consider fifty years to be about the

period required for Teak to attain its full size. In the Malabar Forests sixty years has been found by experience to be the time required for Teak to acquire its full size. But there can be no doubt this period will be found to vary much in different Forests, and to depend greatly on the early treatment the young tree meets with, either in the shape of cultivation or accident.

44. *Young trees.*—With a view to ascertain the proportion of young trees or seedlings to large trees, a spot was selected in the Binedah Forest, that seemed most calculated to afford results that might be held applicable generally to other Forests similarly situated in alluvial plains. A square of one hundred yards was measured, and within that space twelve large and thirty small trees or seedlings were found.

In the higher Forests situated on the slopes of the Yomah hills the proportion is not quite so great. Probably about two seedlings to every full-grown tree may be taken as the general proportion of seedlings to full-sized trees throughout the Forests, except those of the Prome district, where there is a total want of seedlings, owing to the destructive fires to which the Forests in that district are exposed.

No Forests are exempt from the injurious effects of fire, but the dry and parched condition of the Prome Forests during the hot season, from March to May, and the great extent of Forest land which has of late been laid under Tonya cultivation in that district, along the lower slopes of the Yomah hills, where the teak Forests are situated, renders the effect of fires here more destructive to the Forests than in any other part of the Province.

In consequence of the drought and heat of the Prome Forests, arising from causes already described, as well as their westerly aspect and exposure to the dry westerly winds in March and April, which pass for sixty miles over parched and arid hills before they reach the Teak Forests, the trees are here nearly all deciduous, so that the fallen dry leaves forms a thick and uniform layer, which is spread over every part of the Forest, and when these are once ignited at any one point, the flame is wafted by the westerly wind over the whole, so that no seedlings can possibly escape. In this way it is easy to account for the absence of seedlings without ascribing it to any peculiar difficulty in the germination of Teak seeds, which is not found to be the case with respect to other Forests.

In order to account for the absence of seedlings in Forests that have been exhausted or over-worked, it has been said that the elephants employed in dragging timber eat them. But besides the general objection to this assertion, Teak belongs to a family of plants *Verbenaceæ*, that affords no fodder for animals, and I have satisfied myself in passing repeatedly through Forests infested with wild elephants, that they do not cause the slightest injury to young Teak.

A circumstance that may assist in explaining the ill success that has attended former attempts at planting Teak is, that the Teak will not vegetate or grow under shade. In almost every instance where Teak is felled, bamboos take possession of the ground. In a Forest on the Phoungyee side of the Mahoya Pass, from which most of the Teak was removed, (the old stumps only remaining together with a single Teak tree here and there) the old Teak Forest was replaced by a bamboo Forest, under which not a single young Teak was to be seen. But in parts of the same Forest where the bamboos were dead, and the surface exposed to the rays of the sun, numerous Teak seedlings were seen in every direction, springing up, as it were, from latent seed that had lain dormant under the shade of the bamboos, until these died, as bamboos do in a given time after flowering. These young plants were however, no doubt, produced from fresh seed, derived from the few straggling Teak trees which were still left, but so long as the bamboos occupied the ground, the Teak seed cast upon it came to nothing.

45. With regard to the plantation or renewal of Teak Forests, whatever outlay it would be attended with, would at least treble itself in the shape of interest on money, during the period of time that would elapse before any return whatever could be expected from it. Secondly, any change of views on the part of Government, attended with the withdrawal of the necessary establishment required for the protection of the Forests, or any accidents by fire or neglect on the part of the Superintendent or his establishment, or any relaxation of the most stringent rules for the prevention of unlicensed felling of Timber, occurring at any time within the next fifty years, would be attended with the loss of all expenses incurred and more or less complete destruction of all prospect to be entertained of eventual returns.

The method of improvement I would suggest, is one that might be gradually introduced, and would consist in simply taking advantage of

the interrupted way in which Teak is found to be dispersed at intervals, always in clusters and detached groups, by having the young seedlings taken up where they are too close, and transplanted in the vacant intervals where the soil is suitable. Take for instance the Swah Forest, which is described in para. 24, to consist of a chain of small Forests extending for several days' journey along the banks of the stream and its branches. These small Forests are each from two to three hundred yards to a mile or upwards in length, with intervals between, varying from half a mile to four miles, where their continuity is broken either from the intermediate spaces having been exhausted by fire, or by the excessive felling of timber. It is quite evident from the nature of the tree, and the manner in which it distributes itself, that if these spaces were planted even with a few seedlings, placed at long intervals, other seedlings would in their turn collect round those that are planted, and thus all the little detached Forests, of which the Swah is composed, would eventually be converted into one great and continuous Forest. This I pointed out to the Goung-gwai on the spot, who fully entered into my views, and I put his practical qualifications to the test by requesting him to point out Teak seedlings of a year's growth, and he never failed to distinguish them correctly from seedlings of other kinds of trees. He evinced the same intelligence with regard to soil. I made a point of testing the intelligence of Goung-gwais in other Forests, and found them, with few exceptions, quite competent and ready to undertake the kind of improvement I have here proposed.

It would be necessary to clear the ground where the seedlings are planted partially, and keep it clear afterwards for the first three or four years of their growth, for which purpose I would allow each Goung-gwai from four to eight laborers, (according to the extent of the Forest,) to be employed for the space of one month after the commencement of the rainy season and two months after its close. I would further recommend small premiums to be awarded periodically, of not less than 10, nor more than Rupees 20, to these Goung-gwais who keep their Forests in best order and who do most for their extension. With regard to the Prome and other Forests, where there may be a scarcity of seedlings, it would be necessary to establish nurseries, if, upon the suppression of fires, the spontaneous growth of seedlings be not sufficient to re-stock the Forests.

46. It is of great importance, however, at this stage of the enquiry, to enter into details of all the difficulties with which the protection of the Teak Forests of this Province is attended. In the first place, there are the difficulties from fire, and, in the second place, from the unlicensed cutting of timber.*

47. Fires arise no doubt from many causes, which may be ascribed to accident, but the general and prevailing cause is that description of cultivation described in my remarks on cultivated plants appended to this Report, under the general term of *Toungyas*.

The Kareens and Yaibaynes, who inhabit the Forest tracts, have no cattle, their cultivation being performed by manual labor, and as their numbers are small, labor is scarce, and in the case of the Yaibaynes, directed chiefly to mulberry and rice cultivation, while that of the Kareens is limited to rice and cotton, barely in sufficient quantity for their own consumption. With respect to the Kareens, it is remarked in the observations referred to, that as they occupy remote Forests difficult of access, where timber is useless and land of no value, the inconvenience arising from their *Toungyas* is not likely to be felt, or in other words, is not so pressing as the evils arising from the *Toungyas* of the Yaibaynes, and more especially of the Burman inhabitants of the plains. The practice is in the case of Burmans confined to those who inhabit villages along the skirts of the hills, and as they have a choice of excellent rice-lands in the plains, it might perhaps, without any injustice whatever, be checked, or altogether prohibited. It is highly probable, that in consequence of the loss of cattle and the disturbed state of the Prome district, that many were driven by necessity to this mode of cultivation as a temporary relief, who are now prepared to give it up. On the other hand I have reason to think, that it is resorted to by some as a means of evading Forest Rules directed against cutting and felling timber, but which are silent on the subject of burning timber and destroying Forests by means of fire. A suspicious case of this description occurred in the lower Forests on the Koonoug, where the Forests were destroyed by fire for the purpose of clearing the land for village cultivation, and a large quantity of Teak timber thus obtained by the parties who fired the Forests, found a ready market at *Toungthoo* for the erection of barracks.

In the Prome district, on the right bank of the Shoay-lay Choung, five miles North-east of Pongday, Teak Forests were cut down for Toungyas, together with fine mangoe trees, which give a rich and cultivated appearance to the country wherever they appear. In this and all such places where there is no want of unappropriated lands adapted for the ordinary rice cultivation, Toungyas ought to be prohibited, as besides the destruction of Forests, they convert the finest lands into a wilderness, where nothing will afterwards grow, but *Melica latifolia*, a kind of worthless reed and low jungle.

48. Now as Teak and Rice, the two great staple productions of the province, require two essentially different soils, it is unnecessary that the one should interfere with the other. Rice is best grown on low flat plains, subject to inundation; Teak will only grow in a dry soil, raised sufficiently to protect its roots from the influence of inundation and stagnant water; it would therefore be no injustice or hardship whatever, at least to the Burman population, to declare that lands occupied by Teak, shall not be cleared for cultivation, since it would only be following the dictates of nature and of reason. As regards the Kareen and Yaibayue Toungyas, the only suggestion I can offer is that Regulations be formed with a view of lessening, as far as possible, the evils arising from them.

49. The Forests above described, according to the foregoing Returns, contain 5,05,975 growing trees of eighteen inches girth and upwards, while the Southern Forests, described in my Report of last year, contain, according to the Returns I have received, 1,49,647 growing trees of eighteen inches girth and upwards, making 6,55,622 the total number of green trees composing the Teak Forests of the Province. No pains have been spared to render the Returns of the quantity of Teak timber as the disposal of Government as accurate as possible. Under absolute and complete protection, the Forests ought to afford an annual supply of 13,000 logs for fifty years, which is about the period at which the present young trees under eighteen inches girth would be coming into use. Any irregularities or neglect attended with waste, injury, or working beyond the annual limit above fixed, would be attended with the exhaustion of the Forests. If instead of large timber 13,000 logs of half-grown timber were annually removed, the Forests would be liable to exhaustion, as the large trees left standing would become hollow and useless, while

the Forests would be deprived of the succession of fresh trees to supply their place ; in order therefore to avoid the exhaustion of the Forests, it is necessary, not only that the annual drain upon them should not exceed 13,000 logs, but that the 13,000 logs taken away should be full-grown timber. On this point I may refer to paras. 33 and 34 of my Report on the Southern Forests, in which the injurious effect of the removal of under-sized timber is dwelt upon in detail, and the proper remedy pointed out. I was then, when that Report was written, under the impression that an exception should be made in favor of masts, spars and other timber required for naval purposes, but I now understand, that the largest timber is required for masts and keel-pieces, and that although small timber may do for crooks, yet the best are afforded by large timber, and as to small crooks and spars, it would not be advisable to allow their supply from Pegu to interfere with any general measure that may be considered indispensable for the protection of the Forests. I would therefore urge very strongly the adoption of such measures on the part of Government, as would no longer leave the removal of under-sized timber under any circumstances optional or resting with the discretion of the local authorities, and that the lowest dimensions at which a Teak tree should be felled, be fixed by Act of Legislative Council, at five feet girth, taken by measurement at the middle of the log.

50. Seasoned timber consists of three kinds, namely, nathat, fallen or dead trees, killed trees, and felled trees. Teak timber is particularly liable to die or be blown down. The light soil in which it grows is liable to be removed both by rain and wind from the roots, which became exposed to injury by fire, and the tree dies or is blown down : the largest trees are those most liable to become nathat. Of the first class timber in the Tounghoo Forests, 8 per cent. is nathat ; of the second class only 4 per cent., and of the third class timber only 2 per cent. is nathat. As regards the porportion of nathat or dead timber to green timber, better results than the above will be obtained from the Bohnge Forests, which have not been worked for a series of years past. In these Forests there are 119 nathat to 465 trees, being 25 per cent. of the first class, 67 to 418 or 17 per cent. of the second class, and 115 to 5,610 or 2 per cent. of the third class. The other kinds of seasoned timber are killed trees still standing, and trees that have been felled after having been

killed. Unless Teak timber has been killed by the removal of a circle of the inner bark, and allowed to stand in that state for one, two or three years, according to the size of the tree, it will not float from its great weight. Besides its additional weight, which it never afterwards loses by subsequent seasoning, green timber is supposed to be more liable to decay and warp than that which has been properly desicated in the manner described. Of 22,107 logs of seasoned timber remaining in the Tounghoo, Prome and Tharawaddy Forests on the 30th of April, when the Returns were closed, 7,695 were nathat, 6,246 killed trees still standing, and 8,166 were felled timber. The total value of the whole, according to the rates obtained for the seasoned timber in the Southern Forests, would amount to Company's Rupees 1,00,864. This total does not include new timber felled without license, of which there may be about 1,500 logs in the Tharawaddy, and probably the same quantity in the Tounghoo Forests.

51. On the 26th of September 1853, when the annexed Notice was

Notice is hereby given, that all the Forests in the Province of Pegu being the property of Government, any person who shall cut, mark or fell any Teak timber, in any of those Forests, without authority, will be liable to be apprehended and prosecuted according to law.

All timber which has been cut in the Government Forests from the commencement of the present year, or which may hereafter be cut without license, will be liable to confiscation.

By Order, &c.,
(Signed) J. McCLELLAND,
Offg. Supt. of Forests.

PEGU COMM'R'S OFFICE, }
Rangoon, 26th Sept. 1853. }

published, it was not intended to recognize the right of any person to felled timber lying in the Forests, because if that right had been conceded, it would have been impossible to prevent the removal of other timber, as killed trees and nathat, which were clearly part and parcel of the Forests. That this was the light in which the question was regarded at the period referred to, is clear from

the letter of the Commissioner to my address, No. 45, under date the 30th of November 1853, wherein he observes,—“The enclosure No. 6 refers to “the Phoungyee Kyoung. It contains a Report on the Forests by Mr. “Abreu, who states, he has been informed that there are 400 killed and “600 felled trees on this stream.” “It will be desirable,” he adds, “to ascertain this point as soon as possible, with a view of making it available “for the timber market.” Also in the 10th para. of the same letter, alluding to other Forests, he “thinks it highly desirable that you” (alluding to the Superintendent of Forests) “should take immediate steps for ascertaining the number of trees therein, whether felled or standing killed, “with a view to advertising the same for sale by Government.” But

although the right to remove felled timber was not acknowledged, no steps could be taken to prevent the removal of such timber until the Forest boundaries were fixed. It would be impossible in the case of timber lying in the Forest districts to say whether it lay in the Forests or not, and thus a tacit sanction was given to the removal of felled timber from the Southern Forests until the 30th of May 1854, and in the case of the other Forests now under consideration until the 30th of May 1855, which was the earliest period at which their boundaries could be fixed and the seasoned timber disposed of on the part of Government. In the mean time no impediment whatever was offered to parties removing felled timber from the Forests, unless such timber bore clear and distinct evidence of having been felled in opposition to the Notice of the 26th of September 1853. On the 30th of May 1854, when the boundaries of the Southern Forests had been fixed, and an inventory of the seasoned timber contained

The Forests of the Province of Pegu having been declared the property of Government, all timber which may be removed from this date will be liable to confiscation; all timber that may have been removed from the Illaine, Pegu and Phoungyee Forests, subsequently to the 1st of January last, the date on which an inventory was taken of their contents on the part of Government, will be liable to confiscation.

By Order, &c.,
(Signed) J. McCLELLAND,
Offg. Supt. of Forests.

OFFICE OF THE OFFG. SUPT.
OF FORESTS IN PEGU,
Rangoon, 30th May 1854.

in them having been taken preparatory to its sale, the annexed Notice was published. The Commissioner cancelled that part of the Notice which gave it a retrospective effect to the 1st of January, from its alleged *ex-post facto* character, (although it was nothing more than the assertion of a right that had never been questioned, and which was essential as a matter of form to preserve the integrity of the Territories,) and the Southern Forests were declared closed from the 30th of May 1854. Upon this Notice the Commissioner remarks:—

“This Notice is very necessary. Previous orders have prohibited any persons felling timber in the Forests, all felled timber having owners may be presumed to have been removed, and it is now necessary to take measures for preserving that which remains from being taken away by persons who have no right thereto.”

52. The course to be pursued with respect to the Tharawaddy and Tounghoo Forests was thus marked out by the precedent established in the Southern Forests, and on the 30th of May 1855, when boundaries of all the Forests were fixed, and the inventories of the seasoned timber contained in them prepared, they might have been closed, and the seasoned

timber contained in them offered for sale, as in the case of the Southern Forests. But this course, though strongly urged by me, was not considered by the Commissioner expedient, who directed the Tharawaddy and Tounghoo Forests to remain open, to enable private parties to remove timber from them until the 1st of January 1856. In throwing open the Tounghoo and Tharawaddy Forests, by the order of the 3rd of November 1854, the object of the Commissioner seemed to be that they might pass from Burman to British rule in a manner most consistent with the rights of property in felled timber. I suggested to the Commissioner at the time to withhold this order until after my approaching visit to these Forests, when I should be able to ascertain exactly what felled timber there might be to dispose of, and devise means for making it over to its owners if they were to be found. The order was however issued without waiting for the objections I had to urge against it, and when these were stated, that portion of the order relative to Forests situated in the Sitang Valley, south of the city of Tounghoo, was cancelled. It is now ascertained that there are 3,937 logs of felled timber in the Tounghoo Forests and 940 in the Tharawaddy Forests. If the order of the 3rd November had been withheld as I suggested, compensation might have been made to those who were deprived of timber, rather than interrupt for twelve months the introduction of a regular system while the Forests are exposed—in the meantime, to more or less injury from unlicensed cutting. For example, one of the tests by which old timber is distinguished from new is the freshness or otherwise of the marks of the axe on the butt end of the log. Hence it has been a rule to confine the meaning of the terms “cutting, marking or felling” timber in the Forests (*vide* Notice of the 26th of September 1853) strictly to their literal sense, but when the right of persons to timber lying in the Forests was for the first time acknowledged in the order of the 3rd November 1854, that rule became no longer tenable and the fresh marks of the axe on timber brought down to the Revenue stations were no longer proof of timber being newly cut, so that the prohibition against felling timber becomes to a certain extent a dead letter, (*vide* Appendix marked B,) which allows persons to cut up timber in the Forests.

53. As the Forests, when opened without restriction for the removal of felled timber, any interference on the part of Forest authorities, with persons removing timber, would have been resented or complained of as

obstructions in the exercise of acknowledged rights. Little could therefore be done for the protection of the Forests, the first two or three months after the issue of the order of the 3rd of November 1854. On my arrival at Tounghoo, on the 10th of February last, I found nearly all the timber collected for the erection of barracks to be newly cut. The Forest Assistant, Mr. Gibson, stationed at Tounghoo, having unfortunately died of intermittent fever contracted in the Forests, ten days before my arrival, the only information I could obtain regarding timber matters I reported to the Commissioner, the substance of which was, that a very general impression seemed to prevail about Tounghoo, that timber might be felled and removed from the Forests, provided it was made over for the erection of Barracks to the Assistant Commissioner, who took upon himself to suspend the collection of duty on it. On reporting these circumstances to the Commissioner, while at Tounghoo in March last, and more especially the removal of timber from the Forests situated south of the city of Tounghoo, which could not be conveniently brought up against the stream and made available for barracks, but which might more readily be carried down the river to Shoay-geen or Mouhmein, he extended the order of the 3rd of November to these Forests, thus throwing them open like the others until the 1st of January 1856. The steps directed by the Commissioner to be taken, to prevent the removal of new timber from Forests south of Tounghoo, after he had thrown them open, in his letter No. 10 of the 20th of March 1855, were impracticable, as the country adjacent to the mouths of the creeks (six in number on each of which I was desired, during the rainy season, to have an establishment) being at the season referred to under water and rafts of timber might be carried off in any direction and thus evade the vigilance of any establishment placed at the mouths of these creeks. I therefore deputed to Tounghoo the most trustworthy native assistant on my establishment, and was so fortunate as to obtain, by accident, the services of an educated English gentleman of high character, a brother of Doctor DeRenzy, to take charge temporarily of the duties of Forest Assistant at Tounghoo during this difficult crisis, and have left it entirely to Mr. DeRenzy to take such precautions as he may think necessary for the protection of the Forests of this district.

54. I have thus stated the natural difficulties with which an efficient protection of the Forests is attended, consistently with a due regard to the

rights of property, and although much of the difficulty to which I have referred may be considered to be temporary, arising out of the commencement of a new system of management, yet, as these Forests have never been subject to any system of management or control whatever, the introduction of any regular plan of improvement must necessarily be slow, and in the meantime, unless some general precaution be taken irreparable injury may be done to the Forests. What I would propose is to prohibit the employment of Teak timber throughout the Province for barracks and other public buildings, and after the 1st of January 1856, the period when the Tounghoo and Tharawaddy Forests are to close, or such seasonable time after that date as may enable parties to dispose of their property, to render Teak timber throughout the Province of Pegu contraband, admitting only foreign timber for the Rangoon market.

55. The suppression of the use of Teak timber, and the reservation of the Forests for naval purposes, would not be attended with any inconvenience as far as the native portion of the population is concerned. The purposes for which this timber has been hitherto chiefly required was the erection of public buildings, houses for Phoungyees and travellers, and the manufacture of oaks, &c. As regards the erection of Phoungyee houses it appears to have been an obligation forced upon the people by the late Burmese Government, that these edifices should be built of Teak, rather than a matter of choice or discretion with the people. However that may be, Phoungyee houses are now being built of other kinds of wood, which are just as lasting and as strong, as I myself saw in the vicinity of Pounday. The great consumption of Teak now is for barracks and other public buildings, as well as in the erection of private houses throughout the Province. So long as this is sanctioned, and a ready market is every where found for Teak, it will be impossible to protect the Forests. The list of timber attached to this Report shows that the riches of the Forests are not confined to Teak, the only difficulty being to make a selection from amongst such a vast variety of other species of timber. While at Tounghoo, I pointed out to the authorities four kinds of timber there available, which may be had within a few miles of the station, without exposing the Teak Forests to the unnecessary drain required for the erection of barracks, &c. At Shoung-geen there is also probably a considerable demand for Teak procured at the expense of the Teak Forests, but which might be supplied by the

Pymmah Forests on the Sitang above that station. Pymmah is equal to Teak for house-building, and superior to it for posts exposed to wet ground. The Aing Forests east of Shoay-doung and other parts of the Promé district would supply the wants for building at all the stations in that direction, while other kinds of valuable timber, indiscriminately called by Europeans jungle-wood, but which are carefully distinguished with proper names by the Burmese, as Pyin kadoe and Pymmah, may be had in abundance from the Hlaine, Phoungyee and Pegu Forests for building purposes in Rangoon. I would therefore very earnestly urge the necessity of an immediate stop being put to the unnecessary waste of Teak timber for building and other public purposes throughout Pegu, unless on requisitions to be passed by the Superintendent of Forests, and that the local traffic in Teak timber be entirely suppressed and the article made contraband.

56. *Tariff.* The rates obtained for seasoned timber disposed of in the Southern Forests, on the 30th of May last, being Rupees 6 per log for first class timber in the Zannayee or Pegu Forests, and Rupees 8 per log for that of the Hlaine, afford an average nearly corresponding with the rate of duty I proposed in para. 36 of my Report on the Southern Forests, under date the 5th of April 1854. The rate of duty then proposed was obtained from a log of not less than six feet girth and twenty-five feet long, which contains $1\frac{1}{2}$ tons of timber as the minimum size to be passed for duty, which, being levied at the rate of 15 per cent. on a valuation of Rupees 40 per ton, would be Rupees 7-10-5 per log. The average of the prices subsequently obtained by the sale of timber in the Southern Forests for first class timber per log was Rupees 6-9-0, and the seasoned timber in the Southern Forests is now under removal at that rate. The Commissioner, in his observations on the tariff proposed in my Report of last year, was of opinion that the rates should not be generally higher, certainly not much higher than those of Moulmein, "where the rates were fixed in 1848, with reference to the collections of previous years, when a duty of 15 per cent. was taken on the timber valued at Rupees 14 per ton." Now the duty of 15 per cent., levied on the Teak of the Tenasserim Provinces, when first introduced, was equivalent to duties on timber cut in the Burmese Forests. Mr. Blundell states, that 15 per cent. *ad valorem* was levied at a valuation below the market rate, either in money or in kind (*vide* letter to Govern-

ment March 1838.) It was afterwards regarded in the nature of a "rent" for the privilege of cutting timber. When an application was made to Government in July 1834, for a remission of the "rent" in favor of timber used for ship-building at Moulmein, the Government replied, "the thriving condition of the trade under that impost was the best evidence that it was not too high, and until the Forests should become so exhausted as to render it necessary to bring timber from a greater distance at an increased expense, His Lordship in Council would not be disposed to reduce the rent." (*Resolution of Government, 5th January 1835.*) In 1841 the Forests having begun to fail, a rule was introduced, that for every tree cut, five young trees should be planted. (*Despatch of Court of Directors, No. 6 of 1845*) by the parties removing timber, in compensation for which the *ad valorem* duty of 15 per cent. was levied on a commutation price of Rupees 30 per ton of 50 cubic feet, instead of the market rate per log (*Order of Government, 8th September 1841.*) In June 1842 a question was raised as to whether timber brought from the Shan States, upon which duty had been paid to the Shan Government, should pay, as foreign timber, the same duty as that brought from Forests within the British territory, upon which it was decided, that as the Shan timber derived its value only from the advantage of the Moulmein market, it should be subject to the same duty as timber, the growth of Forests in British territory. On the 18th March 1844, the Bengal Government, adverting to the inconsiderable income derived from the impost on foreign timber and its hindrance to trade, directed, with the sanction of the Supreme Government, the entire abolition of the duty on foreign timber, a step which was entirely approved of by the Court of Directors, but "with regard to the Government Forests, instructions were given for levying the rent from the lessees for the privilege of felling trees under the Rules of 1841." (*Despatch of Court of Directors, No. 6 of 1845.*) Major Broadfoot, however, delayed carrying out this order in as far as it related to foreign timber, considering that it would cause a needless sacrifice of revenue; but in order to meet the wishes of Government in some measure, he reduced the rate of assessment, although he was of opinion, that the former rate "did not prevent a great increase to the timber trade," which was then in a thriving state. Subsequently Major Broadfoot's successor, Major Durand, represented these facts to Government, and showed that, after the changes which had

been made in the mode of measuring and valuing the timber, the duty amounted to only 5 per cent. *ad valorem*, which he thought was a very moderate and unobjectionable tax. Under these circumstances the Government of India, on the 4th of October 1845, sanctioned "the levy of a duty of 15 per cent. calculated on a valuation at the rate of Company's Rupees 14 per ton on all timber imported into Moulmein, whether the growth of the Tenasserim Provinces or of any foreign territory." (*Selections from the Records of the Bengal Government*, p. 126.)

57. This was the position in which the question stood in 1848, when the rates were fixed at Moulmein with reference to the collections of previous years. It will however be observed, that the 15 per cent. was regarded in the nature of a rent "for the privilege of cutting timber." Originally the "rent" was equivalent to the duties levied in the Forests under the Burmese Government which were one log in every ten, together with six per cent. in the price realized at Rangoon, which, with certain fees for registration and brokerage, amounted to somewhat more under the Burmese Government, than an *ad valorem* duty of 15 per cent. levied in the market price. When the Tenasserim Forests began to fail, and it became necessary, for their maintenance, in 1841, to require the lessee to plant a certain number of young trees for every large tree they removed, the *ad valorem* duty was then levied on a commutation rate of Rupees 30 per ton of 50 cubic feet, instead of the market rate per log, and eventually, in 1845, when the Forests became nearly exhausted, and the supplies of timber had to be brought either from remote parts of the Tenasserim Provinces, or from foreign states, the duty was still further lowered to 15 per cent. on a valuation of Rupees 14 per ton. The Moulmein rates, as they were fixed in 1848, are therefore, in my opinion, to be regarded in the light of inland duties on foreign timber, and the Pegu rates should assimilate to what the Moulmein rates were before 1841, when the removal of timber was unencumbered with any obligations for planting, namely, an *ad valorem* duty of 15 per cent. levied below the market rate. In para. 35 of my Report of last year, in the Southern Forests, it was shown, that 70 per cent. of the timber passed for duty in 1854 at Rangoon consisted of small half-grown wood. The object now is to put an end to traffic in timber of that description, and to provide for the removal from the Forests of timber only fitted for exportation and naval purposes. The 36th para. of the Report just referred to, together with the

Tabular Statement No. 3 annexed thereto, embodies the details of the tariff I would propose, being an *ad valorem* duty of 15 per cent. levied on market prices of Rangoon. The rate of duty proposed was Rupees 7-10-5 per log, which corresponds nearly with the rates since obtained by the sale of the seasoned timber in the Southern Forests, which were as follows:—

Thoungzai Forest,	Rs. 8 0 per log.
Oakkan „	„ 6 8 „
Magayee „	„ 8 0 „
Phoungyee „	„ 4 8 „
Pegu or Zamayee,	„ 6 0 „

Thus affording an average of Rupees 6-9-9 per log, including mast pieces. The duty proposed would be merely protective, the Forests being worked on the plan adopted for the sale of seasoned timber in the Southern Forests, at rates inclusive of duty. In submitting my original proposals connected with these measures, mast pieces and other timber required for special purposes in ship-building were held distinct, subject to an *ad valorem* duty on their market value, calculated on the Rangoon prices, (*vide* Tabular Statement No. 3, attached to my Report of the 5th of April 1854.) The Commissioner however proposed an amended Table (A.) attached to his remarks on my Report, in which he fixed the duty on all logs at Rupees 3, and omitted the term “mast-pieces,” but ordered the adoption, in lieu thereof, of a scale of rates to be levied on all logs above a certain length, depending on differences of five feet. But this I pointed out to be quite impracticable, as it would entail the necessity of every peon or native in charge of rafts being supplied with a measuring tape, the use of which he would require to learn before he could tell what timber composed his raft. For this and other reasons detailed in my letter No. 17, of the 29th of May 1854, mast pieces were included in a general duty adopted temporarily of Rupees 4, a log all round, pending further orders, when the whole question of timber revenue in Pegu should be fully submitted for the consideration of the Government. During the past year, it will be seen, from the general Tabular Statement No. 5 attached to this Report, that seventy-three mast pieces, two keel pieces, and fifty-five yard pieces have been passed for duty at Rupees 4 each, a rate bearing no proportion whatever to the nature of such timber.

58. It would of course be desirable to assimilate as much as possible the rates of duty levied on timber in the Tenasserim and Pegu Provinces. The accession of new Forests in Martaban, and the appointment of a Curator of Forests at Moulmein, affords grounds I think for revising the Moulmein rates on timber produced in Forests situated in British territory. It is likely that measures attended with large outlay, for the renovation of the Forests, may, at no distant period, be had recourse to. I have only refrained from recommending some such measures on this occasion, in consequence of the precarious protection of the Forests at present from fire and other causes, which are not yet brought within control. When, however, the people settle down to industrious habits, and roads are formed so as to bring the Forests under more immediate observation, it may then become desirable to place over each Forest one or more English Foresters acquainted with planting and the propagation of plants. The accumulated salary of such establishments, extending over a series of years, before any returns would become available to cover the outlay, may place the Forest value of Teak timber and the duty that ought to be levied upon it in a different light from that in which the question has been generally regarded. I would therefore recommend the adoption of a tariff as originally proposed in the 36th para. of my Report on the Southern Forests, preserving the designations of the various pieces of timber and the rates of duty exhibited in the Tabular Statement No. 3 attached to that Report. Before any change is made, I would propose the publication of a notice similar to that of the 30th of May 1854, calling upon the owners of timber lying outside the boundaries of the Teak Forests throughout the province, on which duty has not been paid, to register the same, allowing three or four months from the 1st of January 1856 to complete the registration, before the new tariff should come into operation. The proposed tariff would then come into force, in the case of all old unregistered timber. All new timber, except such as may be in the hands of holders of contracts for the removal of seasoned timber from the Forests, should be liable to confiscation. With regard to foreign timber, the Collectors of Customs on the Frontier should stamp all such timber passed into the province from the Burmese territory.

59. The receipts for the past year (1853-54) on account of timber Revenue amount to Company's Rupees 27,560, of which Company's

Rupees 18,204-0-7 was for duty, Company's Rupees 7,517-8-0 for seasoned timber sold in the Southern Forests, Company's Rupees 1,656-6-6 realized by the sale of timber confiscated under the Notification of the 26th of September 1853, as having been felled without license, and Company's Rupees 182-6-8 were realized from the sale of unclaimed timber transferred as such for sale, to the Timber Revenue Office. The number of pieces of timber passed for duty was 18,671, of which 1,659 were full-sized and 15,362 under-sized timber, consisting of yatheet and other half-grown timber. Amongst the full-sized timber were 73 mast pieces, 2 keel pieces and 55 yard pieces; amongst the under-sized were 2,052 crooks. Of 23,899 logs of seasoned timber in the Southern Forests, sold under Notification of the 30th of May 1854, 2,647 were removed by the 30th of April 1855, the date on which these accounts were closed, and although, according to the conditions of the sale, the buyers bound themselves to remove the whole of the timber from the Forests by the 1st of January 1855, yet, in consequence of the delay in obtaining elephants, and other incidents arising from the introduction of a new system of working the Forests, the contractors have applied for an extension of the period to January 1856, to enable them to fulfil their engagement, which may be the more readily complied with as the Government hold possession of the timber until the full amount of purchase-money be paid. Tabular Statement No. 3 shows the quantity and description of seasoned timber sold in the Southern Forests. Tabular Statement No. 4 shows the quantity of confiscated and unclaimed timber sold by auction at Rangoon. General Tabular Statement No. 5 shows the number of logs passed for duty and the amount collected.

60. In the 40th para. of my Report of the 5th of April 1854, I mentioned having taken the precaution to girdle 800 first class timber in the Thoungzai Forest and 2,500 in the Oak kan, to meet the provision that might be required for the market in 1856. In October these provisions were extended to 4,756 logs in the Pegu or Zamayee Forests, making in all 8,056 trees now seasoning in the Southern Forests. This number may be extended, if necessary, so as to embrace the greater part or whole of the first class timber contained in the Forests described in this Report. The annexed Tabular Statement No. 6 affords particulars on this head. Large timber, to which the working of the Forests should be restricted, requires two years' seasoning at least before it is felled.

61. There never appears to have been any made roads in Pegu. Certain lines have been formed by traffic, some of them are mere foot-paths and others formed by carts. The native cart-roads are very circuitous, and it is doubtful whether shorter or more direct lines could be chosen, so as to admit of the construction of permanent roads that would serve at all seasons for military and commercial purposes. Carts pass over the country from Rangoon to the Northern districts during the dry season through Mobee to Oak kan and ThOUNGZAI in a tolerably straight direction. From ThOUNGZAI, towards Pounday and Prome, the direction must deviate from the straight line, in order to avoid the low swampy plains of the Tharawaddy district, and turn considerably to the Eastward along the higher ground, skirting the foot of the hills throughout the Tharawaddy district, and even then considerable difficulty would probably be encountered in carrying it across the low plains, which would have to be crossed in the Northern parts of the Tharawaddy district, to get to Prome.

62. To TOUNGHOO I do not think it would be possible to construct a cart-road by any other line than that already in use in Pegu and Shoa-geen. I have gone over that line of country in a direct line from Rangoon to TOUNGHOO. Although the first seventy or eighty miles extend across two mountain passes, there would be no difficulty as far as regards making a road. The great difficulty would be found in carrying it over the low plains in the TOUNGHOO district, intersected as they are by so many streams subject to inundations, which spread over the country. A road however through the TOUNGHOO district would be very useful during the dry season, without attempting, in the first instance, to make it passable throughout for carts, as it would save at least fifty miles as a dawk-road and render the intermediate districts more accessible than they are at present.

63. The principal places on this line are PHOUNGYEE, in the valley of that name, about 35 miles from Rangoon; ZOUNTOO, in the Pegu Valley, about 30 miles from PHOUNGYEE; KWAI-BYEW-ME, a Yaibane village, situated in the upper part of the Bohnnee district, 30 miles from ZOUNTOO; KAYIN-UGOTOE, near the boundary of the TOUNGHOO district, only 17 miles in a direct line from KWAI-BYEW-ME, although from the density of the jungle a circuit of double that distance has now to be made, for want of a road or even a path. From KAYIN-UGOTOE to THANAPINZICKAR ANAMBAW,

on the Koon River, a distance of 16 miles occurs, from thence to Joebin on the same stream is 8 miles, from Joebin to Alantun on the Phyoo stream is 11 miles chiefly along the foot of the hills, from Alantun to Kway-oke-Poay is 18 miles, and from thence to Tounghoo is 18 miles, the total distance from Rangoon being about 181 miles.

64. Between Phoungyee and Zountoo the Mahooya pass has to be crossed, which is situated between the Phoungyee and Pegu Valleys ; the ascent and descent are steep for about a mile on either side, but there would be no difficulty in making a road. A greater difficulty would be in carrying it through a belt of jungle from the foot of the pass to Zountoo. Between Zountoo and Kwaiby-oung, the Cadoojway pass has to be crossed, situated between the Pegu and Bohnce districts ; but there is very little ascent or descent in this pass ; the chief obstruction is jungle. From Kwaiby-oung to Kayin-ugotoc and Thanapinziek, the chief obstruction would probably be jungle. Between Kayin-ugotoc and Thanapinziek, the Tugton, a large stream, has to be crossed, as well as the Koon stream, near the latter place, but from thence to Tounghoo there is a cart-track all the way. A communication opened along this line would lead through the principal Teak Forests of Phoungyee, Pegu, Bohnce and Tounghoo.

65. In the Forests of the Cadoojway pass, nutmeg and coffee plants were observed on the shady banks of streams. A poison tree, named Nghanmija-zaik by the Burmese, was pointed out by the guide. It is probably an *Antiaris* or the far famed *Upas*. Only a single tree was observed which happened at the time to be out of leaf. The bark was marked with old scars or incisions, from which the juice had been extracted. The scars extended up the trunk to the height of sixty feet. A pale turbid juice exudes from incisions made in the bark, said to be employed for poisoning arrows. *Phytocrene* and *Gnetum scandens*, two plants of much botanical interest, were also found in this part of the journey.

(Signed) J. McCLELLAND,
Offg. Supt. of Forests in Pegu.

OFFICE OF THE SUPDT. OF
FORESTS IN PEGU ;
Rangoon,
The 27th June 1855.

OF THE FORESTS GENERALLY.

White Wood.—Eighty-five species are soft and useless, being only fit for fuel. Many of them however are valuable, either for their fruit, gums, oil-seed or spices; others, for their close and compact structure, are employed in the manufacture of small ware, as a species of *Nauclea* used for making combs, and two species of *Erythrina* yield the light charcoal employed in the manufacture of gunpowder.

These light woods useless as timber, belong to the families of *Urticaceæ* (including more than twenty species of *Ficus*.) and *Sterculiaceæ*, *Laurineæ*, *Rubiaceæ*, *Myristicaceæ*, *Anonaceæ*, *Spondiaceæ* and *Bignoniaceæ*, with odd species from other families.

The remaining white woods, twenty-five in number, valuable for their strength and closeness of grain, demand a more extended notice. Seventeen of these are fit for house-building, and eight, from the hardness and fineness of their grain, render them valuable as fancy woods for cabinet making.

Red-colored Woods.—These are twenty-five in number, seven of which, from their strength and solidity, are adapted for the various purposes of house-building; seven, from the elegance of their grain and colour, are suited to the various purposes for which mahogany is used, and eleven are suited to the finer purposes of fancy cabinet work.

Yellow Woods.—These are three in number, hard and fine grained, and suited to fancy purposes.

Dark-brown Woods.—These are twelve in number and are all valuable. Eleven are adapted for house-building, and probably for ship-building, and one for special purposes requiring great strength and hardness.

Black Woods.—These consist of four different kinds, all of which are valuable for their strength and hardness.

Light-brown Woods.—There are seven varieties of this colored wood, embracing all the timber of most value in the Province, exclusive of Teak.

List of White-colored Woods.

Nos. 1 to 17 are adapted to every purpose of house-building.

Nos. 18 to 25 are adapted for fancy work and cabinet making.

No. 1.—*Hibiscus macrophylla* is very plentiful in Forests of the Pegu and Tounghoo districts. It is a tall slender timber, of three or four feet girth, and would do for boards and house posts.

No. 2.—*Kydia calycina* is plentiful throughout the Forests, more especially in the Pegu and Tounghoo districts.
Bokemaiza. The small saplings are used, from their great strength and elasticity, by the natives, for making banghy sticks, but it is large enough to afford timber of three or four feet girth.

No. 3.—*Eriolæna tilifolia* grows plentifully throughout the Pegu and Tounghoo districts, attaining a height of fifty feet, with a girth of seven or eight feet sometimes, but usually about six feet. It is a strong tough timber, similar in its properties to *Kydia*.
Let-pan.

No. 4.—*Connarus speciosa*. Plentiful in all the Forests growing scattered with Teak in the Tounghoo district and in the Forests of Pegu. It is a large, heavy and strong timber.
Gwai-douk.

No. 5.—*Grewia floribunda*. A very common tree from Rangoon to Tounghoo. It is a good serviceable timber for all ordinary purposes of house-building. There are three other species of *Grewia*—*G. asiatica* is a large tree like *G. floribunda*, but not so plentiful. The other two kinds are small and comparatively scarce.
Myat-yah.

No. 6.—*Grewia spectabilis* and *G. Hookerii*. Both very plentiful, and of a quality like the last mentioned. They attain a girth of about three to four feet and grow up tall and remarkably straight. They are found with Teak in the Forests of Pegu and Tounghoo.
Phet-woon.

No. 7.—*Sapindus rubiginosa*. This tree is not very plentiful. It is found in the Pegu district, where it attains a girth of three or four feet, growing tall in proportion and straight.
Hseik-kyee.

No. 8.—*Millingtonia simplicifolia* is also scarce, but found in the Forests of the Pegu Valley. Its properties as a timber are valuable from its weight and strength.

No. 9.—*Sandoricum Indicum*. This timber is large and plentiful, both in the Rangoon and Tounghoo districts. It is one of those trees which are cultivated by the Burmese for their fruit. It is found near all large villages, but it is scarce in the Forests.

Khayau-kayoe. No. 10.—*Amoora (Aglaia) rohitoca*. This tree is scarce, but found in the Tounghoo Forests.

No. 11.—*Juglans tricola*. Scarce, but found on the banks of the streams in the Pegu district. It is a hard strong timber.

Ta-soung-let-wah.

No. 12.—*Geloxium bifarium* is found in the Rangoon district, it seldom exceeds three feet in girth, and is only fit for house posts.

Hsai-chan-bayah.

No. 13.—*Excecaria agallocha*. Plentiful in the Rangoon and Tounghoo districts.

No. 14.—*Walsura piscidia*. This tree is very plentiful in the Pegu and Tounghoo Forests, as well as in the Tharawaddy Forests. The timber is large, heavy and strong.

Joe-boc.

No. 15.—*Canarium geniculatum*. This is a large and valuable timber found in the Pegu Valley, but it is scarce.

No. 16.—*Indigofera* sp. This tree is four or five feet in girth, found both in the Rangoon and Tounghoo districts though it is scarce.

Doun-daloun.

No. 17.—1. *Terminalia belerica* and 2. *T. violata*. The latter very plentiful throughout the Pegu, Tounghoo, and Tharawaddy Forests; the former less plentiful. Both are large timber and would answer for all purposes of house-building.

1. Pangah.

2. Laibwai.

No. 18.—*Semecarpus anacardium* is a middle-sized tree, common in the Pegu and Tounghoo Forests.

Chai-bin,

No. 19.—*Sibia* sp. (*glomerata*.) Very plentiful in Prome, Pegu and Tounghoo, as well as about Donabew; a compact and close-grained wood, seven or eight feet in girth,

Thit-phyew.

and is a timber that deserves to be attended to with a view of bringing it into use.

Thabyaiwet-kyā. No. 20.—*Casuaria pentandra*. Scarce, but found in the Pegu district. Timber strong and close-grained.

Taliennoe. No. 21.—*Choolmoogra odorata*. There are a few trees of this about Rangoon, and it is also met with on the banks of streams in the Tounghoo Forests, but must be considered scarce.

Kha-boung. No. 22.—*Strychnos nux-vomica*. This is a very common tree throughout the Forests. The timber is strong and close-grained, but never of very large size.

Baibyah. No. 23.—*Conocarpus robustus*. Very large and strong timber, growing plentifully in the Pegu, Tounghoo and Prome Forests along with Teak.

Bwai-jin. No. 24.—*Bauhinia parviflora*. *B. brachycarpa*. The former attains three or four feet in girth, the latter is of rather smaller size. The first is very plentiful throughout the Tounghoo and Prome Forests.

Jouk-bin. No. 25.—*Elæodendron integrifolia*. This is a very plentiful, strong, fine timber, and is found throughout the Forests of the Tounghoo and Pegu districts, as well as about Rangoon.

List of Red-colored Woods.

The following seven sorts are strong and adapted for house-building :—

Kanazoe. No. 26.—*Heritiera minor* and *H. litoralis*. These species are common in the Rangoon district, along the creeks and Sanderbunds. They afford the Soondree wood so well known in Bengal for its strength and durable qualities.

No. 27.—1. *Eugenia pulchella*. Very plentiful in the Pegu and Tounghoo districts. 2. *E. myrtifolia*, 3. *vulgaris*, 4. *ternifolia* and *jambolana*, also occur, but less plentifully than the first-mentioned species. They all afford excellent close-grained strong timber,

but subject to the attack of white ants.

1. Khway-tha-byai.
2. Thabaijeen.
3. Thabyai-tha-phan.
4. Thabyow-tha-byai.

No. 28.—*Sonneratia apetala*. A strong hard wood of coarse grain,
 found throughout the Sunderbunds, under the
 Kamtala. parallel of Rangoon. It is the timber of which
 boxes for packing beer and wine are made of in Calcutta.

No. 29.—*Ternstroemia Chebula*. A large timber, plentiful throughout
 Kayoobin. the Teak Forests.

No. 30.—*Lagerstræmia Pymmah*. A common and valuable timber,
 Pymmah. found generally all over the country. It ceases
 however a little below Tounghoo and Prome, so
 that at those places it cannot be made available for building purposes;
 but at all the lower stations from Prome and Tounghoo downwards,
 it ought to supersede the use of Teak.

No. 31.—*Aglæa spectabilis*. A large tree, met with along the banks
 of rivers in the Pegu and Tounghoo districts. It affords a light service-
 able timber, somewhat stronger than the American Pine, and capable of
 being wrought with little labour.

No. 32.—*Ulmis alternifolius* and *U. integrifolius*. Two of the largest
 trees in the province; they are found about towns
 Thalai. and villages in the Prome district, but not below
 that latitude. The elms to which family the trees in question belong
 afford valuable timber.

The following seven kinds of red wood are equivalent to mahogany :—

No. 33.—*Cedrela Toona*. Found on the banks of streams in the
 Thit-kado. Tounghoo district, but it is scarce.

No. 34.—*Swietenia chikrassee*. Found along with Teak in the Pegu
 Nga-bai. district, but it is not very plentiful.

No. 35.—*Armosia dyscarpa*. This is found here and there widely
 scattered in the Swar and other Forests North of
 Thitwajee. Tounghoo.

No. 36.—*Pterocarpus dalbergioides*. Paulouk. This is found chief-
 ly as a large tree about the neighbourhood of Prome and inhabited
 places to the north of that town, but rarely in the Forests.

No. 37. *Careya arborea*. This is one of the most numerous trees
 throughout the province. The timber is large,
 Baubwai. and together with the following, forms the chief
 material of which the carts of the country are made.

No. 38.—1. *Barringtonia acutangula* and 2. *B. speciosa*. The former
 1. Kyai-tha. most plentiful in the Tharawaddy district and
 2. Kyai-gyee. the latter in the Pegu Forests. The wood is hard
 and of fine grain. It is used in constructing carts.

Theet khyā. No. 39.—*Castanea indica* is a large tree, plenti-
 ful in the Rangoon, Pegu and Tounghoo districts.

The following eleven kinds of Red Wood are adapted to cabinet
 making :—

No. 40.—*Adenanthera pavonia*. Found in the Rangoon, Pegu and
 Ywaigyee. Tounghoo districts, but widely dispersed and not
 very plentiful.

No. 41 — *Calophyllum longifolium*. This is found near towns, to-
 gether with two other species of the same genus,
 Thur-rabee. which are of smaller growth.

No. 42.—*Dolichampnia pomifera*. This has been found on the Pym-
 mah Choung in the Pegu Valley. The trees are
 Doukyamah. from three to four feet in girth.

No. 43.—*Pygium acuminata*. Scarce, but found on the banks of
 streams in the Tounghoo district, attaining a girth of five or six feet.

No. 44.—*Photinia serratifolia* Found in the neighbourhood of Ran-
 goon and along the banks of the streams in the
 Doukyat. Rangoon district, in the direction of the Teak
 Forests.

Seet. No. 45.—*Acacia stipulota*. A large heavy
 timber, found throughout the Forests from Rangoon
 to Tounghoo.

No. 46.—*Acacia Catechu*. Large and plentiful timber, found in great
 quantities in Forests of the Prome and Tharawad-
 Shabin. districts, as well as on the Shan side above
 Tounghoo.

No. 47.—*Acacia Serissa*. Found throughout the province ; timber
 large and plentiful, particularly in the Tounghoo
 Seet. district.

No. 48.—*Acacia elata*. Plentiful in the Pegu, Tounghoo and Prome
 districts ; timber straight, lengthy, and of large
 Seet. girth.

No. 49.—*Ricinus diococa*. Scarce and found only on the banks of streams in the Pegu and Tounghoo districts. Very tall, large timber.
Tawthedinbin.

No. 50.—*Antidesma paniculata*. Small crooked timber, of close grain, found in the Rangoon, Pegu, Tounghoo and Tharawaddy Forests.
Byitzin.

Yellow Woods.

There are three kinds fit for fancy work, viz.

No. 51.—*Gmelina arborea*. Plentiful in the Pegu and Tounghoo Forests. It is a large and remarkably strong tough timber.
Kyoohoe.

No. 52.—1. *Morinda bracteata* and 2. *M. exserta*. Both are small trees, only found about Phoungyee houses, in a cultivated state.
1. Yaiyoe.
2. Mhan bin.

No. 53.—*Garcinia Cowa*. Scarce, but found widely dispersed in the Forests.
Toun-tha-tai.

Dark-brown Woods.

No. 54.—1. *Pterospermum accroides*, 2. *P. subacerifolium*, and *P. acerifolium*. Three species of large timber found growing along with Teak in all the Forests. The two first are plentiful, but the third kind is scarce. This timber is extremely valuable and is as strong as either Teak or Oak. Its durability for purposes of ship-building has never been tested, because it has never been desicated or killed like the Teak. It attains a girth of ten or twelve feet and rises to a lofty height.
1. Thamajamwai-zoke
2. Najee.

No. 55.—*Pentaptera arjuan* and *P. glabra*. This is also a valuable timber found growing in all the Teak Forests; it consists of two kinds, both of equal value. The timber is as strong as Teak and usually attains a girth of from seven to nine feet, with height in still more lofty proportion. This timber has never, I believe, been fairly tried for ship-building.
Touk-kyau.

No. 56.—*Melanorrhæa usitata*. This is the *Theet-see* or *Lignum vitæ* of Pegu. It is plentiful in the Tounghoo and Prome Forests, especially in the former. It is of dark red colour, of extreme closeness of grain and density of structure,
Theet see.

with a specific gravity so great, that it serves in place of iron as anchors for native boats. Its great hardness and weight prevent its being employed in house-building. It would answer for sheaths or block-pulleys and other purposes connected with machinery, where great strength and density are required. The tree is very common above the parallel of Tounghoo and grows to a girth of six feet.

No. 57.—*Dalichampia pomifera*. Scarce, only met with on the banks of streams in the Pegu Valley, particularly in the Pymmah Choung.

No. 58.—*Butta frondosa*. Plentiful, but the timber is crooked and only fit for ornamental work.

No. 59.—*Mangifera attenuata*. Scarce, but found in the Pegu and Tounghoo Forests.

No. 60.—*Anacardium occidentale*. Scarce, and only found near large towns.

No. 61.—*Zizyphus Jujuba*. Scarce, only found near large towns, rarely in the Pegu and Tounghoo forests.

No. 62.—*Averrhoa Carambola*. Scarce, and only found near towns.

No. 63.—*Pterocarpus Sapota*. Plentiful in the Pegu and Tounghoo Forests, as well as about Rangoon.

No. 64.—1. *Ancestrulobus carnea* and 2. *A. malis*. Plentiful in the Pegu and Tounghoo Forests. The timber grows very tall, but seldom exceeds three feet in girth.

No. 65.—*Rondeletia tinctoria*. Small timber, which, together with the last seven kinds, are adapted, from the fineness of their grain and elegance of colour, for ornamental work.

Black Woods.

No. 66.—*Dalbergia*. Of this there are four kinds, all yielding a heavy timber, which will not float, similar to Sissoo. These trees are very plentiful in the Tharawaddy

and Hlaine districts, also in the lower parts of the Tounghoo district. The timber seldom attains a very large size and is generally found of a girth of three or four feet.

No. 67.—*Cassia Sumatrana*. Plentiful throughout the Hlaine, Pegu and Tounghoo Forests. It is the Bombay black wood.
Mayalee.

No. 68.—1. *Inga xylocarpa* and 2. *T. bijemina*. Two species, affording iron-wood. This first is called Pin-ka-doe by the Burmese. It is found in all the Teak Forests.
1 Pyin Kadoe.
2 Tauyen.
In the Prome Forests it is usually about six feet in girth, but in all the other Forests it attains a larger size, frequently eight or nine feet. It is most plentiful throughout the Province. The second species is of smaller girth, but grows to a great height.

No. 69.—*Diospyros melanoxylon*, or Ebony. This tree is found throughout the Forests, seldom however of greater girth than three or four feet. It is very plentiful.
Oukchinya.

Light Brown Woods.

No. 70.—*Dipterocarpus alatus*. This timber is called in Bengal Battee Sal. It is excellent for every purpose of house-building, especially for posts. It is found chiefly to grow on laterite in the Tounghoo and Prome districts.
Aing.

No. 71.—*Dipterocarpus torbinatus*. Timber of great size and strength. It is fit for any purpose for which Saul is employed, being of the same family. It is chiefly employed for canoe and boat building. It is found in all the Forest districts, except Prome where it is scarce.
Kauyeen.

No. 72.—*Shorea robusta*, or Saul. This timber is found chiefly on the Shan side of the Tounghoo district, and in the Forests north of Tounghoo.
Eing-gyeen.

No. 73.—*Melicocca trijuga*. A most valuable timber, called by the Burmese Kobin, and employed by the natives of the country for cart-wheels, oil-mills, and other purposes requiring great strength and solidity. It is found in greatest perfection on the banks of the Sitang in the Kareen Forests above Tounghoo ; but it is also found throughout the Pegu and Tounghoo Forests
Jobin.

in abundance, more particularly the latter. It is also found along with Teak in Tharawaddy and Prome Forests.

- No. 74.—1. *Dillenia augusta*, 2. *D. scabra* and 3. *D. speciosa*. The two first are plentiful in the Forests of the Pegu district, but become scarce to the north of it, and the third species is scarce even there. They all three afford large and good timber for house-building.

1. Zinbyewn.
2. Byew.
3. Thabyew.

No. 75.—*Hopea odorata*. This timber, which is said to be plentiful in the Tenasserim Forests, is scarce in Pegu, and a few trees are to be found about the vicinity of Rangoon.

No. 76.—*Azadaracta Indicum*, or Ncem, is plentiful in the Prome district only; it is a large, but soft timber, only fit for flooring.

Thembau-kamakah.

The above list embraces all the useful timber found in the Forests of this Province, except Teak. Besides timber well adapted for house-building, the list contains several promising kinds that have never yet been fairly tried for ship-building, and which in point of strength are equal to Teak or Oak. The timbers referred to more especially are Nos. 73, 68, 54, 55, 30 and 37, Nos. 25, 23, 19, 14 and 4 are also deserving of trial for ship-building, and No. 56 for any special purposes, where great strength and density are required. Until these trials are decided, the timber employed for house-building purposes should be restricted to other kinds.

Fibrous Plants.

No. 1.—*Triumfetta lobata*. This annual grows to a height of five or six feet, presents a small yellow flower in December, consisting of five petals, and in February presents a small round capsule covered with stiff bristles.

Phetwoon.

No. 2.—*Urena lobata*. This is also an annual flowering in December, but though in other respects resembling *Triumfetta*, the flower is of a light pinkish colour, and the capsules are a little larger than the last mentioned plant, and differ still more in their presenting from three to five grooves, marking the detriscence, or the number of valves or parts of which the capsule is

Kat-sai-nai.

composed ; but in other respects the two plants appear alike to ordinary observation, and alike also as to the value of their fibre. They are both generally found growing together, and are two of the most plentiful weeds which are to be found in Pegu. They take possession of all ground recently cleared of three-jungle about Rangoon, and extend without interruption the Pegu and Tounghoo districts, but become scarce or only occasionally met with in the Prome and Tharawaddy districts.

No. 3.—*Corchorus olitorius*. The Bungli of Bengal. It grows wild about Rangoon during the rainy season, and probably also in other districts, though not to the extent that *Urena* does. The plant might of course be cultivated to any extent. The fibres of the bark is the jute of Bengal.

Phetwoon.

No. 4.—*Corchorus fascus*. This is likewise an annual, which affords a strong and abundant fibre, springing up in the rainy season and mostly found growing along with *Urena*, but not to the same extent. It affords a strong fine grey fibre.

No. 5.—*Malva cuneifolia*.—This is another annual found growing in single plants here and there all over the country, but chiefly in the jungle. It affords a strong yellowish white fibre, but from the scattered way in which it grows in a wild state, it would be difficult to collect it in any quantity.

No. 6.—*Malva tiliaefolia*. Like the last is also a straggling annual during the rains and is found widely dispersed. The fibre of this plant resembles jute.

No. 7.—*Hibiscus violaceas*. A climbing plant found during the rainy season, affording a coarse strong fibre.

No. 8.—*Grewia floribunda*. A very common tree throughout the Rangoon, Pegu and Tounghoo districts, but scarce in the Prome and Tharawaddy districts. The bark affords a coarse strong fibre, not much employed however by the Burmese.

Myat-ya.

Samples of the fibre obtained from all the foregoing plants have been sent to the "Exposition Universelle" for 1855. The plants were cut in September before flowering, and steeped, if in clear water, for twenty days, but if in stagnant or putrid water, for twelve days, when the fibrous part of the bark was easily detached. Further experiments will proba-

bly be necessary to determine the proper time for pulling the plant, as well as the best method of detaching the fibre. It is a highly promising article, both from its peculiar adaptation to the climate and soil of Pegu and from the great demand in which fibrous plants are now held. The *Urena lobata* in particular, from its great abundance in the province, is deserving of attention, with a view to its general cultivation for fibre, which may become an article of export.

No. 9.—*Eschynomene paludosa* is an annual which springs up spontaneously in rice fields, especially in the Tharawaddy district, and affords an excellent hemp.

No. 10.—*Phrynium dichotomum*. Very plentiful in the Forests of the Pegu and Tounghoo districts. It is said to afford a strong fibre.

No. 11.—*Microlaena spectabilis*. This is one of the most numerous timber trees of the Province, and yields, it is said, a fibre fit for making rope, but the Burmese do not make use of it.

No. 12.—*Bignonia coronaria*, a large tree with white flowers, very plentiful in the Tharawaddy and Pegu districts, and *Bignonia spathoidea*, found throughout the province, both afford from their inner bark material for rope employed for local purposes. The inner bark of *Sterculia ramosa* also affords a strong and durable rope in common use.

No. 13.—*Bombax pentandra*, *B. heterophylla* and *Cochlospermum Gossypium*. These afford a soft down, which is attached to the seeds and which the Burmese collect for stuffing pillows.

Cotton is cultivated generally in small quantities by the Kareens and other scattered inhabitants of the Forests, but only for domestic use, it being for the most part spun and converted into cloth called *putso*, which is the common clothing of the Burmese.

Silk is likewise produced in small quantity by the scattered inhabitants of the Forests. The silk-worm is fed on *Morus indicus*, which is cultivated in the light soil of the Teak Forests, that soil being very favorable to its growth.

Spices.

No. 1.—*Myristica moschata*, or Nutmeg, is found growing wild in the Forests between Pegu and Tounghoo Districts, in a light dry sandy soil, formed by deposit on the

banks of the Cadoojway stream. It appeared to thrive, but it is scarce and by no means common. The tree however is from ten to twenty feet high.

No. 2.—*Limonia carnosia*. The small fruit of this, not larger than a nut, is a favorite spice, known in the bazars of Taw shouk. Bengal under the name of Keklani. It is only found in the Pegu district.

No. 3.—*Amyris heptaphylla*. Between the Pegu and Tounghoo districts the leaves of this tree, both dry and in a green state, are a favorite spice to the inhabitants of that part of the country, where it grows plentifully.

No. 4.—*Xanthoxylon budrangye*. A small thorny tree, the dry capsules of which are found in the bazars of India, under the name of Kek-ka-la. The seed abounds in a rich aromatic oil. The bark and large thorns of the trunk are the Tejbul of India. The tree is about twenty feet high in the Pegu and Southern parts of the Tounghoo districts, where it grows upon the banks of streams.

No. 5.—*Laurus nitida*, and a second species, are both small trees, about twenty feet high. Their bark is aromatic and affords an inferior kind of cinnamon. They are found in the Pegu and Tounghoo districts.

No. 6.—*Piper betel*. This grows both in a wild and cultivated state. It is cultivated in small quantity for domestic consumption in every part of the province, except the Tharawaddy district, and grows wild in the Pegu forests, on the Cadoojway Choung.

No. 7.—*Sinapis dichotoma*, or Mustard. This is cultivated in small quantity in the Tounghoo district.

No. 8.—*Capsicum purpureum* and *C. minimum* or Cayenne pepper. Both species are cultivated in small quantity for domestic use.

No. 9.—*Areca Catechu*, or Betel-nut. This is cultivated in small quantity for local consumption.

No. 10.—*Andropogon esculentum*, or Lemon grass. It is cultivated in small quantity in every village throughout the country, and is to be had in all the bazars. It is

a valuable article, and in a dry state might be found a profitable article of export.

Gums and Gum Resins.

No. 1.—*Mothrus*.—*Bombax pentandra*, and *Bombax heterophylla*, are two common trees found in every part of the
 Let-pan. Forests, which yield an astringent gum resin, called in the bazars of Bengal *Mothrus*. I have not been able to learn whether the Burmese extract this gum, but from the abundance of trees affording it, it might become an article of some importance.

No. 2.—*Kotheela*. Six species of *Sterculia*, four of which, viz.
 Tshaw. *Sterculia ramosa*, *S. fetida*, *S. campanulata*, *S. piperifolia*, are very plentiful throughout the province, and yield a gum which is known in the bazars of Bengal under the name of *Kotheela*. The other two species, *Sterculia balangas* and *S. colorata*, are not so plentiful. This gum is probably analogous to *Tragacanth*, which Dr. Lindley states, is obtained from a species of *Sterculia* at Sierra Leonè.

No. 3.—*Hing*, a gum which is well known under that name in the bazars of Bengal, is procurable from two species of *Gardenia*, which yield it in Bengal, and
 Thungsheen-pan. which are very common throughout the Pegu, Rangoon and Tounghoo districts.

No. 4.—*Gamboge*. *Xanthochymus ovalifolius*, which, according to Wright and Arnot, is the only plant in Ceylon that yields gamboge fit for the arts, is found in the Rangoon, Pegu and Tounghoo districts, but it is rather scarce. *X. pictorius*, which is very plentiful, also yields gamboge, but probably of a less valuable description, as also *Garcinia Cowa* or wild Mangosteen tree, which is likewise common.

No. 5.—*Galbanum*. The plant affording this article is not well known, but Dr. Ainsley, as quoted by Dr. Royle, states its Hindustani name to be *Kinneh-ke-gond*, and the latter author observes that a gum resin, known in India under the name of *Kinni-ke-gond*, is afforded by an exudation from the bark of *Odina woderi*. Now this tree constitutes probably a larger proportion of the Forest both in the Prome and Tharawaddy districts than any other, and if found to afford *Galbanum*, might be rendered an important addition to the resources of the Province.

No. 6.—*Gum kino*. The Gum kino from India is supposed to be obtained from *Pterocarpus marsupium*. But as the articles sold as *kino* are produced from trees of four different families of plants, and come from many opposite parts of the world, it is probable that the properties on which their value depends are of a general nature, and therefore that *P. dalbergioides*, equally with *P. marsupium*, affords the *Gum kino* of India, and this opinion is also entertained by others. *P. dalbergioides* is found in the northern parts of the province in the Prome district, chiefly in the vicinity of towns and inhabited places rarely in the Forests.

No. 7.—*Butea*. This gum, which is one of the most valuable articles of the class to which it belongs, is yielded from
 Pounk-pin. incisions in the bark of *Butea frondosa*, a tree of very general occurrence throughout the province, but more especially about Tounghoo, where it cannot escape notice from its bright orange flowers, which illuminate the Forests in all that part of the country during the months of February and March. It appears to be one of the most useful kinds of gum, and might be supplied, to any extent from this province.

No. 8.—*Dammer*. This article is found in the bazars throughout Pegu. It is yielded by the *Shorea robusta* or the
 Pwai-nyet. Saul-tree of India, which occurs plentifully in the Forests on the Shan side of the Sitang, east of Tounghoo, and also, but to less extent, in the Forests of the Prome district. I have not found however that the dammer is obtained from these Forests, as none of the trees appear to have been perforated for it, so that the supplies of this article are probably brought down to Pegu from Forests beyond the frontier.

No. 9.—*Catechu*. Next to timber, *Catechu* or *Cutch* is undoubtedly one of the most important exports of the province, and Pegu Cutch has obtained a reputation,
 Sha-seo. which will always give it a preference in the market. *Acacia Catechu*, the tree from which it is procured, begins to appear about six miles to the north of Rangoon, and from thence it increases both in the number and size of the trees until it constitutes the prevailing character of the Forests to the north-east of Prome, where the trees are fifty to sixty feet high with a girth of seven or eight feet, and it is said to attain even a larger size in the Burmese territories lying north of the boundary. It

is found plentifully in the northern part of the Tharawaddy district, but it is scarcely to be seen on the Tounghoo side of the hills. Thus it is entirely confined to the valley of the Irrawaddy. The manufacture of Cutch is scarcely known or practised below Meeaday, and that which finds its way into the market, as Pegu Cutch probably comes chiefly from beyond the frontier. There is no reason why it should not be manufactured largely from the parallel of Henzadah upwards, as the tree from thence becomes inexhaustible, growing over rich rice plains in places of easy access.

Oils and Oil Seeds.

No. 1.—*Wood Oil.* This is afforded by, and largely extracted from, *Dipterocarpus turbinatus*, one of the largest trees known. It is found throughout the southern as well as all the Sitang Forests, disappearing curiously enough wherever the *Acacia Catechu* appears. Thus, where the latter is in perfection, in the northern part of the Tharawaddy, and Prome districts, the wood-oil tree is rarely seen, and where the latter is found in perfection, as in the Southern Forests and throughout the Forests of Tounghoo, west of the Sitang, there is no *Acacia Catechu*. The wood-oil tree grows in light sandy soil, near the banks of streams, and in dense Forests, frequently attaining 18 feet in girth, with a proportionate height. The oil is extracted by cutting a large notch in the tree, a few feet from the ground, and occasionally stimulating the secretion by scorching the surface of the scar, which is generally converted into charcoal and gives the oil a dirty black appearance.

Sweet or Fatty Oils.

No. 2.—*Connarus speciosu.* A large tree, very plentiful throughout the Rangoon, Pegu and Tounghoo districts, where *Gwai-douk.* it is known under the name of *Kadon-kadet*, remarkable for the quantity of its seed, which are of large size, abounding in sweet oil.

No. 3.—*Obnnarus nitida*, a shrub about ten feet high, is likewise very plentiful, especially in the Rangoon district, and affords an oil-seed of smaller size, but equally rich in a similar sweet oil.

No. 4.—*Ualedupha arborea* and *G. tetrapetala.* Both of these yield an oil expressed from the seed, called in Bengal *Karunga-ka-tel*, which

is used for burning, as well as medicinally for external use as an embrocation. They are both very common trees, more especially in the Prome district. The seed is large and might be collected in any quantity.

No. 5.—*Buchanania latifolia* and *B. angustifolia*. The former is plentiful, both in the Pegu and Tounghoo districts, and the latter is only seen about Rangoon. They both yield valuable oil-seeds of the sweet or fatty class.

No. 6.—*Anacardium occidentale*. This tree, although scarce in the Forests, is largely cultivated about Phoungyee houses and in groves near towns. It yields the *Cashew-nut oil* of the Madras list.

Aromatic or Essential Oils.

No. 7.—*Xanthoxylon badrunga*. This plant, which is found in the Pegu and Southern parts of the Tounghoo districts, affords a plentiful supply of oil-seeds, which has not as yet, I believe, been taken advantage of as it deserves.

No. 8.—*Calophyllum longifolium*, which, from its size, might be reckoned among the timber trees of the province, affords an oil-seed, which would yield an oil probably similar to that of *C. inophyllum*, which is known in Madras as *Pinnacotax oil* (vide list of oil-seeds circulated for information by the Madras Government, November, 1854.) This tree, together with *C. inophyllum* and *C. lanceoluria* is cultivated for the fragrance of its flowers. The seeds are large and contain a considerable proportion of oily matter, which possesses much of the aroma of the flower.

No. 9.—*Spondias mangifera*. This tree, which is cultivated generally by the Burmese in groves near large towns, yields the *Saurapuppo nut oil* of the Madras list. The tree grows to a considerable size and yields abundant seed.

No. 10.—*Michelia Champaca*. This is also a large tree, cultivated greatly by the Burmese for the fragrance of its yellow flowers. It is from this that the *Sum-punghee oil* of the Madras list is obtained.

No. 11.—*Aucklandia costus*. An annual of general occurrence about Rangoon and every part of that district. It affords the *Patchakoo oil* of the Madras list.

The list of oil-seeds might be extended, but I have confined it to those articles only which could be supplied in bulk, more advantageously from Pegu than any other source.

Dyes.

No. 1.—*Carthamus tinctoria*, or Safflower. This is cultivated to a small extent for its flowers, which yield a yellow dye. The dry flowers are found in the bazars of India and Bengal, in the latter under the name of *Kusum*. It is used by the Burmese for dyeing cotton, and might be much more largely cultivated as the climate seems favourable to its growth.

Hsoo.

No. 2.—*Grislea tomentosa*. The red flowers of this plant are used for red dye. In the bazars of Bengal they are found in a dry state, under the name of *Datoke*. The plant is very common in the Prome district and flowers in April. It is not found in the Tounghoo district.

No. 3.—*Butea frondosa* and *B. superba*. The flowers of these plants may be had in greater quantity in Pegu than any part of the east. They are called in the Bengal bazars *Palas-phool* and afford a bright yellow colour. The Burmese are fully acquainted with the value of this dye, and the article is found in all the bazars.

Ponk.

No. 4.—*Galedupha tetrapetala*. The flowers of this yield a fine red dye.

No. 5.—*Adenanthera pavonia*, or red Sandal-wood. Scarce, but found in sufficient quantity in the Rangoon, Pegu and Tounghoo districts. It is called *Rukta chundun* in the bazars of Upper India, a name which Dr. Royle observes is also given to the wood *Pterocarpus santalinus*.

Ywaigye.

No. 6.—*Morinda bracteata*. This wood, of bright yellow colour, is found in the Bengal bazars under the name of *Rouch*, and is valuable as affording a bright yellow dye. The tree is common throughout the province. It is also cultivated about Phoungyee houses.

Yaiyoe.

No. 7.—*Photinia serratifolia*. The leaves of this plant are used for a green dye.

Tainyet.

Thee-dew.

as are of known value and in use with the Burmese.

Plants cultivated for their Fruit.

Ame-sa.

Thin-baw.

Out-sheet.

from the end of February to the month of July. These fruits are now in very general use in hospitals, being found to promote the regular action of the bowels in cases of dysentery and diarrhœa, I may mention, lest their resemblance to the fruit of *Nux-vomica*, might give rise to accidents, that the strong aromatic smell of the wood-apples, like that of all other fruit of the orange family, to which they belong, is the best test by which they may be known from the *Nux-vomica* fruit, which is devoid of aroma.

No. 4.—*Mangoe*. This fruit is very plentiful throughout Pegu, but more especially in the Tharawaddy and Tounghoo districts.
Thayet.

No. 5.—*Averrhœa carambola* is grown about Rangoon and many places in the interior for its acid fruit, which is employed like the unripe *Papaya*, and many other green sour fruits, in curry, and highly prized as a wholesome dish by the Burmese.
Zoung-yah.

No. 6.—*Artocarpus integrifolius*, the Jack, *A. chaplasha*, the lesser or thorny Jack, and *A. lakoocha*, the small Jack. All three varieties are prized by the Burmese as an article of food, especially the first, which grows to great perfection every where throughout the province with little care.
Pain-nai.

No. 7.—*Tamarindus Indica*. The tamarind-tree is so common about almost every town and village in Pegu, that it would appear to be indigenous to the country, yet it is never seen in the jungles, so that it was no doubt introduced originally and cultivated for its fruit and leaves, both of which are in great request. The fruit is found in every bazar in a dry state, the leaves are eaten as vegetables, generally added to curry.
Majee.

No. 8.—*Durio zibethinus*, or Dorian. This fruit can scarcely be said to belong to Pegu, although there are a few trees about Rangoon, which bear fruit, yet the King of Burmah has always obtained the supplies for the royal table from Moulmein.
Doowin.

No. 9.—*Sweet limes* are grown in some parts of Pegu to a very small extent, but as this and two other kinds of wild lime are indigenous to the Forests in the northern
Shouk-cho.

parts of the province, it is probable that oranges might be cultivated with success about Prome and from thence to Meeaday.

The same observation applies to the grape, of which several sorts of wild vine are found in the upper part of the province, so as to render the trial of grape vine*very desirable.

No. 10.—*Plantain*. Although perhaps there is no province in India in which plantains are grown to so great an extent as in Pegu, yet there are scarcely any good plantains to be had in the country. This is owing to the Burmese habit of only eating green fruit, and their total indifference to the finer qualities of flavor. The great use of all fruit with the Burmese is to serve as an addition to their curry, for which purpose one kind of plantain is just as good as another. But now that a market is opened for the better description of this and other kinds of fruit, the introduction of a good stock becomes desirable.

No. 11.—*Pine Apples*. These are perhaps the best of all the cultivated fruits of Pegu, and they require so little care, that they are brought into market in Rangoon in vast quantities of the finest quality from the end of April until the middle of August. In the upper parts of the province, about Prome and Tounghoo, they are scarce.

Wild Fruits.

These are more numerous than the cultivated fruits, and may be considered under two heads, namely, green fruits, employed rather as esculent vegetables, and sub-acid fruits. Of the first, the fruit of the

	<i>Dillenia speciosa,</i>
	<i>Xanthochymus pictorius,</i>
	<i>Sandoricum indicum,</i>
Theet-foe.	<i>Randia oliginosa,</i>
Ny-an-gyee.	<i>Mangifera attenuata,</i>
Yan-sa.	<i>Soneratia apetala,</i>
Wambala.	<i>Ficus macrophylla, F. glomerata, F. lanceolaria,</i>
Kyain.	<i>Calamus, Borassus, Cocus,</i>
Than.	
Oung.	

are used as an addition to curries.

The sub-acid wild fruits, eaten only in their ripe state, are the berry of *Flacourtia cataphracta*, with much of the appearance and flavor of a plum.

Ka-tua-kuzza.	<i>Pierardia Sapota</i> , which resembles the <i>loquat</i> , but which grows in bunches like the <i>leechee</i> . It is equal to either of those fruits and might be greatly improved no doubt by cultivation. It is very plentiful in the Rangoon market from the end of April to the middle of May.
Toun-thalai.	<i>Garcinia Cowa</i> , or wild mangosteen. <i>Spondias acuminata</i> , or long plum.
Kwai.	<i>Spondias mangifera</i> , the fruit is said to be pleasant, with a flavor like the mangoe.
Hzee.	<i>Ziyyzphus juguba</i> :
Tan-thayet.	<i>Mangifera oppositifolia</i> , or wild mangoe. <i>Syzgium balsamicum</i> , a purple berry, with a pleasant flavour.
Malaka.	<i>Psidium pomiferum</i> , a large yellow berry.
Hzee phoo.	<i>Phyllanthus embelia</i> , a large green berry, found in a dry state in the bazars.
Kyet-tha-hen.	<i>Anñidesma paniculata</i> , small sour plum.

To which may be added the albuminous seeds of *Morinda bracteata*, the bean of *Inga doneean*, the acorn of *Castanea indica*, and the seed of the *Jack*, which when roasted are articles of food ; while an infusion of the fruit of *Elaeodendron orientale* is drunk by the Burmese as tea.

Plants cultivated for Food, Oil, &c., in Pegu.

Esculent Vegetables.

Khayan.	<i>Solanum melongena</i> , brinjal.
Thayan-myai-bone.	<i>Solanum lycopersica</i> , tomato or love apple. <i>Amaranthus polygamus</i> , green Bajee, for vegetable curry. <i>Amaranthus atropurpureus</i> , purple ditto.
Penzeing.	<i>Ocymum vilosum</i> , mint for ditto.
Chin-boung.	<i>Hibiscus sabdariffa</i> , red sorrel or roselle for curry.
Kazoon-o.u "	<i>Hibiscus longifolius</i> , another variety for ditto.
Myouk-nee.	<i>Batatas edulis</i> , sweet potatoe. <i>Dioscorea purpurea</i> , purple yam. <i>Dioscorea glabra</i> , the smooth ditto. <i>Dioscorea rubella</i> , the red ditto.

	<i>Dioscorea anguina</i> , the snake ditto.
	<i>Jatropha manihot</i> , the Cassava yam.
	<i>Hedysarum tuberosum</i> , the Batraj ditto.
Myai-bai.	<i>Arachis hypogea</i> , the earth nut.
	<i>Dolichos catjang</i> , long or French bean.
	<i>Dolichos lablab</i> , the Indian ditto.
Moue-lah.	<i>Raphanus sativa</i> , or radish.
Pailiu-moay.	<i>Trichosanthes anguina</i> , the snake gourd.
Kyet-bin-ga.	<i>Momordica charantia</i> , or small ditto.
Tha-boot.	<i>Luffa pentandra</i> , the five-cornered ditto.
Tha-boot-khawai.	<i>Luffa decandra</i> , the ten-cornered ditto.
Boo-shin-sway.	<i>Lageneria vulgaris</i> , the cuddoo or bottle ditto.
	<i>Lageneria pipo</i> , the pumpkin.
	<i>Lageneria melo-pipo</i> , or squash.
	<i>Arum furfaraceum</i> , scaly yam.
Tha-khwa-gyce.	<i>Cucumis usitata</i> , large cucumber.
Tha-khwa.	<i>Cucumis sativus</i> , common ditto.
Hpayai.	<i>Cucumis citrullis</i> , or water-melon.
Kyet-theon.	<i>Allium cepa</i> , the onion.
Gua-yoke.	<i>Capsicum purpureum</i> , red pepper.
	<i>Capsicum minimum</i> , small or bird's-eye pepper.
	<i>Andropogon esculentum</i> , or lemon grass.
Baing.	<i>Cannabis sativa</i> , or bang.
Hsai.	<i>Nicotiana</i> , tobacco.
Koon.	<i>Piper betel</i> .

Oil Seeds.

Moung-ugyeen.	<i>Sinapis dichotoma</i> .
Huan.	<i>Sesamum muralis</i> .

Grains and Pulses.

Pai.	<i>Phaseolus mungo</i> , green gram.
	<i>Eleusine corocana</i> .
Pyouu-boo.	<i>Zea mays</i> , or Indian corn.
Htsen.	<i>Oriza sativa</i> , or rice of numerous kinds.

The Burmese method of cultivation is as simple and rude as the objects of it are confined. Rice is the only thing cultivated to any extent ; the other articles enumerated in the above list, with few exceptions, are

only procurable during the rainy season ; at other seasons, the young leaves, flowers and fruits of almost every plant, that is not poisonous, supply the place of vegetables in their curries.

The cultivation of rice begins in the early part of June, after the first heavy fall of rain in low ground, thoroughly saturated and partially under water. A pair of buffaloes are then yoked to a gigantic rake, having strong wooden prongs about a foot long inserted at about nine inches apart, upon which the driver stands to give additional weight to the rake and to cause the prongs to sink deeper into the soft ground, while he guides the buffaloes, thus traversing the field in every direction, after which, when the surface is thoroughly broken, the seed is sown broad cast. About a month after, when the young crop has risen above the water, it is partly taken up and transplanted in higher ground, previously prepared in the same manner. This is the manner in which all the great rice cultivation of the country is performed. But in high districts, which are never under water, another method is practised by the Hill people, and which, from its effects upon the Forests, deserves to be noticed.

The cultivation alluded to is known in these provinces (for it is not peculiar to Pegu) as *Toungyas*, which probably signifies that the same ground cannot be cultivated twice in the same generation. A portion of the Forest is cleared to the extent of forty or fifty acres, sometimes much more. The timber being felled indiscriminately in the early part of the dry season, lies exposed to a scorching sun, until the approach of the succeeding rains, when it is set fire to, producing a conflagration which is not confined to the *Toungyas*, but spreads over the dry and at this season parched forests, reducing the finest timber to ashes. The ground being thus cleared, and the soil at the same time enriched with ashes, all that is necessary is to await the first fall of rain, and then to sow the rice on the burnt surface without any further preparation. It requires no transplanting or further care, but the same land will not afford another crop, so that the same process must be repeated every year in a new place. Cotton is grown only in these *Toungyas*, and that very partially ; it is sown with the rice, the latter ripening in October is removed, and the cotton allowed to hold possession of the ground, until it ripens its capsules in March ; a few cotton plants, sprung up spontaneously in the same ground from the seed of the previous season

yielding a second year's poor crop. Beyond this the Toungya becomes waste, and several generations pass away before it yields another crop.

This method of cultivation by Toungya is hereditary with the Kareens, who know no other. But as they occupy remote Forests difficult of access, where timber is useless and land of no value, the inconvenience arising from it is not likely to be felt. The practice, however, more especially in the Prome district, is not confined to the Kareens or even to hills, but is adopted by the Burman population to a certain extent in the plain bordering the hills, and in some cases is carried into the plains, where there is no want of good rice ground, as on the north-east side of Pounday.

The observation of Major Phayre has been directed to this subject and whatever can be consistently done to check a practice so wasteful and destructive as regards Teak Forests will be accomplished. The whole of the lower Teak Forests throughout the Prome district have been materially injured by Toungya cultivation, and some of them more or less destroyed.

(Signed) J. McCLELLAND,
Offg. Supt. of Forests in Pegu.

A.

To

MAJOR A. P. PHAYRE,
Commr. of Pegu and Gov. Genl's Agent.

Dated Tounghoo, 8th March 1855.

SIR,

IN my recent examination of the Swah Forests, I found timber newly felled and formed into loozars, some of which appeared to have been felled in a green state, without having been previously girdled or killed ; also girdled trees just felled, with the branches still unlopped and the trunks (which in some cases appeared to me to be fit for mast pieces) entire or not yet divided into short lengths or loozars.

2. The annexed document No. 1 affords all the information I could collect on the subject.

3. In the Koon-oung Forest, on the Kareen side or east bank of the Sitang, also north of Tounghoo, the practice of felling both green and killed timber was more general. The annexed document No. 2 contains the principal information on the subject collected on the spot.

4. At Tounghoo I found in Myke kyec Creek and other places saw-pits rected by private individuals, under the orders of the Assistant Com-

missioner, for the conversion of timber for public works ; but it did not appear that any precaution was taken in order to guard against the private disposal of the converted timber. (Documents Nos. 3, 4 and 5 refer to this subject.) I may remark about 119 logs of newly-cut timber have been seized at the private saw-pits within the town of Tounghoo, pending your orders on the subject.

5. At the Government saw-pits I observed that all the timber converted, as well as 90 per cent. of the logs transferred by the Assistant Commissioner to the Executive Engineer, was new timber, *i. e.*, timber which was felled contrary to your Notification of 20th September 1853, and most of it since the last rains.

6. At Doedhoun and Phraw villages, in the Forests south of Tounghoo, on the Thouk-yai-ghaut Choung, on the Kareen or east bank of the Sitang, I found saw-pits erected for the conversion of timber, the same as at Tounghoo. Documents Nos. 6, 7 and 8 refer to this subject, in addition to which I have to remark that the timber at these saw-pits was all new and much of it green—some of it so green as barely to float, and some so very green as not to float at all, but which lay like stones at the bottom in deep water, and were only discovered in accidentally passing over them in boats when we had them dragged out and examined.

7. My power as Officiating Superintendent of Forests depends on two functions, namely, that of levying a duty and of confiscating new timber—both these functions have been usurped and taken out of my hands by the Assistant Commissioner, *first*, by his addressing a letter No. 232, dated the 1st September last (herewith annexed,) to Mr. Traey, one of my Assistants, (and which I only discovered for the first time in the papers of the late Mr. Gibson, since my arrival at Tounghoo,) suspending the charge of duty on timber applied to public purposes, and *secondly*, by granting Letinhats for the removal of timber from the Forests without the scrutiny of the Forest Department.

8. I do not suppose there was any connivance on the part of Messrs. Tracy or of Gibson in keeping the Assistant Commissioner's letter of the 1st of September back from me, because it appears that Mr. Tracy left Tounghoo on the 1st of September, the day on which the letter was written, and did not receive it until he reached Shoay-gyeen, where he was relieved by the late Mr. Gibson, to whom the letter in question was made over along with the other papers of the office, and probably considered by Mr. Gibson to have been disposed of by his predecessor.

9. All timber, brought down from the Forests, was thus supposed to be required for public works, exempted from duty as well as from the scrutiny of my department.

10. Document annexed, No. 9, affords the Assistant Commissioner's own explanation of the grounds on which he acted as regards the conversion of timber, and you will observe however that the most essential clause of Rule VII., requiring the application for the sale of timber for local purposes to be countersigned by the Forest Assistant of the district, appears to have been omitted, for, on being referred to by me on this head, the Assistant Commissioner had no written authority to show that the Forest Assistant had ever been in any way consulted or cognizant of the Assistant Commissioner's arrangements for the supply of timber.

11. Hence there was no precaution taken that the timber offered for sale was unobjectionable, and the Letinhats or authentics granted (Nos. 10, 11 and 12) to bring in timber afford parties the opportunity of disposing of it as they like.

12. In proof of the reckless disregard for rules and orders exhibited on the part of the Assistant Commissioner in regard to timber, I may mention that the Thook-yai-ghant Forest, referred to in his communication marked No. 9, of the 24th February last, from which he gave permission, as he says, "to several owners of timber, who satisfactorily "proved their rights to it, to convert it into certain sizes for the exigencies "of the public service, as this timber cannot, under any circumstances, be "brought in here in the log," is one of the Southern Forests to which the Notification of the 21st of November 1854 did not apply, from which the removal of any timber whatever, except under contracts entered into with the Forest Department, was absolutely prohibited; and although the timber from this Forest could not perhaps conveniently be brought up the Sitang against the current to Tounghoo, yet there was nothing to prevent its being taken to Shoay-gyeen or Moulmein, from which latter place elephants have been sent up to drag it.

I have the honor to be, &c.,

(Signed) J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

DOCUMENT NO. 1.

Camp Swah Village, dated 16th February 1855.

Moung Ngyeen, of Kyodon village, states in reply to the following questions :—

1 Q.—Were you aware of the Notification proclaiming the Teak Forests to be the property of Government ?

A.—Yes, and I know all parties are prohibited from killing, felling, and marking Teak trees without an order ; but I do not know from whom the sanction should come.

2 Q.—Had you any sanction for felling trees ?

A.—I was employed by Nga Pouyai to fell teak timber.

3 Q.—Who is Nga Pouyai, and where does he live ?

A.—I know Nga Pouyai to be a resident in some village near Tounghoo ; he informed me that the timber was for the Myowoon of Tounghoo.

4 Q.—Did Nga Pouyai show you any written authority from the Myowoon ?

A.—I did not myself see any written authority, but was told that Nga Pouyai held such authority, until it was taken from him by the late Mr. Gibson ; but although the Letmhat was taken away, I was assured by Nga Pouyai that I might go on felling timber without any disturbance or prosecution.

5 Q.—How many trees did you fell ?

A.—Four logs, which are those you saw lying on the opposite side of the river.

6 Q.—But there are six loozars on the opposite bank of the river, and a little further on six more.—who cut the others ?

A.—I myself only felled four, Nga Pouyai cut the other two, and those we saw higher up the Swah Choung were probably cut by Nga Pouyai himself.

7 Q.—Some of the logs were green timber, that had not been previously killed or seasoned ; what use do you make of green timber ?

A.—I felled the timber because it was pointed out to me by Nga Pouyai, and do not know how long it was killed, whether two months or three.

Nga Pouwhoay, of Swah Village, examined.

1 Q.—Do you know Nga Pouyai ?

A.—Yes, he is a relation of mine.

2 Q.—Does he hold any office ?

A.—No.

3 Q.—Has he any friends in office ?

A.—I am not aware.

4 Q.—Did you ever see the Letmhat held by Nga Pouyai ?

A.—Yes, but it was written in English, and I could not read it, but I was assured by Nga Pouyai that it was the Myowoon's Letmhat, and that he (the Myowoon) required ten or fifteen logs of timber.

5 Q.—Was the Letmhat for ten or fifteen logs of timber, or was it for more ?

A.—I do not know.

Thus taken down by me.

(Signed) J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

DOCUMENT NO. 2,

Camp Koon-oung Village, 17th February 1855.

La Quay Kareen examined.

1 Q.—Who are you ?

A.—I am Thoogyee of the Koon-oung district.

2 Q.—Did you fell any Teak timber in this District ?

A.—I got an order from the Myowoon to fell Teak timber in this Forest, which I have done.

3 Q.—How much did you cut ?

A.—I have myself felled 300 logs, but I cannot tell how much other people may have cut.

4 Q.—Do you consider that any one may cut timber ?

A.—When I said I could not say how much, other persons may have cut, I mean in other Forest districts, on account of the Myowoon.

5 Q.—Was it by order of the Myowoon you acted ?

A.—Yes, I received an advance of Rupees 200 from the Myowoon, before I commenced to carry out his orders.

6 Q.—How much timber did the Myowoon authorize you to cut for him ?

A.—As much as I could fell.

7 Q.—Do you now understand that you are to go on cutting ?

A.—Yes, I am still cutting.

8 Q.—Is the Mywoon aware you are still felling trees ?

A.—Of course.

9 Q.—What is the cost of timber on delivery ?

A.—4 cubits in girth, 4 Rs. a log ; 5 cubits, 5 Rs. ; 6 cubits 6 Rs.,—exclusive of duty.

10 Q.—Where is the timber delivered ?

A.—In Tounghoo.

11 Q.—Who is the timber made over to in Tounghoo ?

A.—To a man whose name I do not know, under the employment of the Mywoon.

12 Q.—Whose receipt do you get for the timber you make over ?

A.—I get a receipt from the Mywoon himself.

13 Q.—Have you got any of those receipts by you ?

A.—I misunderstood the former question. I submit a memo. of the timber I deliver to the Mywoon, and he keeps an account, but does not give me a receipt.

14 Q.—When you take the timber to Tounghoo, do you report it to the Timber Revenue Office there ?

A.—When the timber is for the Mywoon, and having been told there is no duty on it, what is the use of reporting it to the Timber Revenue Office.

15 Q.—Have you written authority from the Mywoon for felling timber ?

A.—I received verbal orders direct from the Mywoon.

16 Q.—At what date did you receive the first order from the Mywoon to cut timber ?

A.—In the month of Nayone last, at Tounghoo.

17 Q.—Who gave you authority to erect a saw-pit in this Forest ?

A.—The Mywoon. I am sawing boards for the Mywoon, not only myself, but in all the other Forest Districts they are sawing timber for him.

18 Q.—How much have you sawn for him ?

A.—I am only commencing, I have only sawn two logs.

19 Q.—How much sawn timber has been ordered ?

A.—No given quantity, but all the boards I can saw up I am ordered to give over to the Mywoon.

20 Q.—But I saw rafters as well as boards ?

A.—I will sell rafters to any one who will pay me for them if the Myowoon does not want them.

21 Q.—Are you aware of a Proclamation by the Commissioner of Pegu and Governor General's Agent, prohibiting all parties cutting, felling or killing trees throughout the Province ?

A.—I am aware of the prohibition, but afterwards, on the representation of the Myowoon, the order was cancelled, so I have been informed by the Myowoon himself.

Thus taken down by me.

(Signed) J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

DOCUMENT NO. 3.

Camp Tounghoo, 21st February 1855.

Shoay Boe examined.

1 Q.—Where do you live?

A.—I am a resident of Tounghoo.

2 Q.—How many saw-pits have you?

A.—Two, one in Tounghoo and another in Khoung-ou.

3 Q.—Where is the Tounghoo saw-pit ?

A.—In Myke-kyee Creek.

4 Q.—How much timber have you cut up ?

A.—I have already sawn up thirty-five logs, and there are still twenty ready to be put on the pit.

5 Q.—Do you expect more timber down to be sawn ?

A.—Yes.

6 Q.—Where do you get it from ?

A.—Koon-oung Forest.

7 Q.—Who sends it to you ?

A.—One Nga Wai, who buys the timber from the Foresters.

8 Q.—Where do you get the timber for the other saw-pit ?

A.—I get it from Thouk-yai-gat Forests.

9 Q.—How much have you cut there ?

A.—I have cut in all thirty-five logs in both the saw-pits.

10 Q.—Who do you get the timber from for the Khoung-ou saw-pit ?

A.—From Nga Youk ?

11 Q.—Who is Nga Youk ?

A.—A resident of Khoung-ou.

12 Q.—How much did you pay him a log ?

A.—Three Rupees.

13 Q.—What kind of logs were they ?

A.—Loozars.

14 Q.—Who does he saw timber for ?

A.—For the Myowoon, who said he required it for public works.

15 Q.—Who pays him for it ?

A.—The Myowoon.

16 Q.—What are the charges ?

A.—I received in advance Rupees 600.

17 Q.—Who did you receive the advance from ?

A.—I received from Nga Koon, by order of the Myowoon.

18 Q.—Who is Nga Koon ?

A.—The Myowoon's steward.

19 Q.—What are the charges for inch boards ?

A.—One Rupee and eight annas.

20 Q.—What are their breadths ?

A.—One foot.

21 Q.—What is the charge for half-inch boards ?

A.—One Rupee and eight annas each.

22 Q.—What is their breadth ?

A.—One foot.

23 Q.—You say you had two saw-pits, one at Mykc-kyee and another at Khoung-ou ; had you not other saw-pits behind the Commissariat godown ?

A.—No.

24 Q.—Whose saw-pit was that which was partly removed yesterday morning ?

A.—I think it belongs to the Commissioner.

25 Q.—Do you know exactly the saw-pit I mean ?

A.—Yes.

26 Q.—Were there one or two saw-pits ?

A.—I do not know anything about the saw-pits.

27 Q.—Do you know of a long slimbryn and sosapinis ?

A.—I do not know.

28 Q.—Who sawed the boards that were landed the other day, and are still lying near the place (pointing to them) ?

A.—They do not belong to me, nor do I know who they were sawn by.

29 Q.—Do you pay duty on the timber you saw up ?

A.—The Mywoon told me there is no duty on the timber, provided I make the planks over to him.

30 Q.—In sawing up loozars, do you not get rafters out of them as well as boards or planks ?

A.—Yes.

31 Q.—What do you do with the rafters ?

A.—If the Commissariat wants them, I make them over to the Commissariat, and if not, I sell them to the best advantage.

32 Q.—Have you ever sold any boards ?

A.—No.

33 Q.—Have you ever sold anything but rafters ?

A.—No.

34 Q.—Who do you deliver the boards over to ?

A.—Nga Kin, the head sawyer.

35 Q.—When you make over the timber to Nga Kin, does he give you a receipt ?

A.—No, but I go with it to the Mywoon, who keeps a sort of memo.

36 Q.—When the timber is sawn in the Forest, who brings it to Tounghoo ?

A.—The sawyers.

37 Q.—Does any one come along with the sawyers to see the timber made over ?

A.—No, only the sawyers bring it.

Thus taken down by me.

(Signed) J. McCLELLAND,

In the presence of

Offg. Supt. of Forests, Pegu.

(Sd.) R. ABREU.

„ C. FERNANDEZ.

DOCUMENT No. 4.

Camp Tounghoo, 28th February 1855.

Nga Pouyai examined.

1 Q.—Have you lately been to the Teak Forests ?

A.—Yes.

2 Q.—What Forests have you been to ?

A.—Koon-oung Forests.

3 Q.—Did you bring down much timber ?

A.—Six yats and a pair of shinbym's.

4 Q.—Did you buy them ?

A.—Yes, from Nga Chilhtha, the Goung-gwai of the Koon-oung Forests.

5 Q.—Did you make arrangements with him for any more timber ?

A.—No.

6 Q.—What did you do with the shinbym's.

A.—I sold them to a Chinaman, now living in the Tseetkay's house.

7 Q.—What was his name ?

A.—I don't know.

8 Q.—Do you know MOUNG NGYEEN of Kyodon village ?

A.—Never heard of the man.

9 Q.—Do you know Nga Pouwhoay of Swah village.

A.—No.

10 Q.—Where you ever at Swah village in your life ?

A.—Yes, about three months—no, twelve months ago.

11 Q.—What business are you ?

A.—I do not trade in timber, I have a boat, and go about as a merchant.

12 Q.—Did you employ MOUNG NGYEEN to fell timber for you ?

A.—Never.

13 Q.—Where do you live ?

A.—I am a resident of Tounghoo district, and reside in Yocdayah-bouk.

Thus taken down by me on the day, month and year first above written.

(Signed) J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

DOCUMENT No. 5.

Camp Tounghoo, the 28th February 1855.

Nga Tsan-wah, Resident of this place, examined.

Q.—Have you any saw-pits?

A.—I have no saw-pits of my own, but I have been requested by one Nga Phoo (to whom you sent a notice) to look after his saw-pits during his absence at Maulmain.

2 Q.—How long has Nga Phoo been gone to Maulmain.

A.—Eleven days.

3 Q.—How many saw-pits has Nga Phoo?

A.—Six.

4 Q.—Where are they?

A.—Two in Myo-Gyee and the other four in Mykek-yee-bouk.

5 Q.—Where is Myo-Gyee?

A.—On the bank of the river.

6 Q.—Has he (Nga Phoo) not two other saw-pits West of the Commissariat godown?

A.—There was a saw-pit there, but it was broken down about fifteen days ago.

7 Q.—Who does the long shinbym belong to at that saw-pit?

A.—It belongs to Nga Pou-nyo, who sold it to the Tseetkay.

8 Q.—Who is Nga Pou-nyo?

A.—He is a merchant.

9 Q.—Where does he live?

A.—In Mykek-yee-bouk.

10 Q.—Does he deal in timber?

A.—Can't say, but I know he went up and brought some timber from, the Forests.

11 Q.—And among the rest, this big shinbym?

A.—Yes.

12 Q.—Did Nga Pou-nyo bring down much timber besides?

A.—No.

13 Q.—Have you not saw-pits of your own at Mykek-yee-bouk?

A.—No.

14 Q.—Who do the other saw-pits there belong to?

A.—Besides Nga Phoo, two belong to Nga Shoay Boe.

15 Q.—How much timber has been sawn up at Nga Phoo's saw-pits altogether ?

A.—I can only state from the date of Nga Phoo's departure from this place.

16 Q.—How much is that ?

A.—Forty-one logs already sawn since the absence of Nga Phoo, and there are twenty-five logs ready to be put up on the pit.

17 Q.—What Forests did the timber come from ?

A.—All from Koon-oung Forests.

18 Q.—Who did Nga Phoo get his timber from in the Koon-oung Forests ?

A.—Can't say.

19 Q.—What authority had Nga Phoo to saw up timber ?

A.—The Myowoon's.

20 Q.—The Myowoon's Letmhat ?

A.—Yes (hands it in.) (*Vide* papers annexed.)

21 Q.—What did you cut the timber into at the saw-pits ?

A.—Inch and half-inch boards, one foot broad.

22 Q.—Who were they for ?

A.—The Myowoon.

23 Q.—Were they for the public works ?

A.—Yes.

24 Q.—I think I have understood boards for public works were required to be twelve inches broad, now I saw narrow boards cut at Nga Phoo's saw-pits, who were they for ?

A.—For the public works also.

25 Q.—Who were the rafters for ?

A.—Should the Myowoon require them, I should give them to him.

26 Q.—If the Myowoon did not want them, would you consider yourself at liberty to sell them to any one else ?

A.—Yes.

27 Q.—What does Nga Phoo get per 100 for inch boards for public works ?

A.—For inch boards one Rupee and eight annas each, and for half-inch boards one Rupee and four annas each board.

28 Q.—What did Dr. Bond pay Nga Phoo for inch boards ?

A.—I did not sell him any, and can't say whether Nga Phoo did or not.

Thus taken down by me, the day, month and year first above written.

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

In the presence of,

(Sd.) R. ABREU.

„ C. FERNANDEZ.

(A True Copy)

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

DOCUMENT No. 6.

Camp Doe-thoung village, 22nd February 1855.

Shoay Gone, Resident of this place, examined.

1 Q.—Who are you employed by to saw timber ?

A.—The Myowoon of the Tounghoo District.

2 Q.—Have you received any advances from him ?

A.—Not a single pice.

3 Q.—Have you entered into any contract or engagement with the Myowoon for converted timber ?

A.—I have a verbal understanding with him to make over all sawn timber to him.

4 Q.—Any Letmhat ?

A.—Yes.

5 Q.—Where is it ?

A.—Here it is, (*vide* copy appended.)

6 Q.—You petitioned the Myowoon to be allowed to remove felled timber, of which you informed him that there is a large quantity in the Forests. He grants your petition, and allows you to erect saw-pits in the Forests for its conversion, on condition that if the Civil Courts require it, it shall be made over accordingly. Are those the terms of your agreement ?

A.—Yes.

7 Q.—If the Civil Courts do not require it, what would you in that case do with it ?

A.—I would sell it, with the permission of the Myowoon.

8. Q.—How many logs have you here ?

A.—I brought thirty logs from the Forests, ten of which I brought down ten days ago, and twenty logs the day before yesterday, with the aid of two elephants.

9 Q.—What do you pay for the elephants ?

A.—A Rupee a log if it be near, and one and-a-half Rupee if from a greater distance.

10 Q.—To whom do the elephants belong ?

A.—Nga Tsandah, a native of Maulmain, now living at Tounghoo, in the Myowoon's compound, in the same house with Ko Dway, the Myowoon's father-in-law.

11 Q.—Did Nga Tsandah bring any more elephants than two ?

A.—No, but I have heard that a friend of his brought up at the same time (*i. e.*, about twenty-five days ago) two other elephants, which are gone up to the Swah Forests.

12 Q.—Is there much timber for the elephants to bring to this place from the Thouk-yai-ghaut Forests ?

A.—I expect to get down 100 loozars.

13 Q.—Will you have any difficulty in getting sawyers to cut up so much timber ?

A.—No.

14 Q.—Could Moug Loo have the elephants to drag timber to his saw-pit in the village of Phraw, if he asked for them ?

A.—Yes, but they cannot be spared.

15 Q.—Whose village is this ?

A.—No particular person's village, there is no Goung.

16 Q.—Who is the Thoogyee of this District ?

A.—Moug Lhine.

17 Q.—Who is the Goung-gwai of this District ?

A.—Shoay Boe.

18 Q.—Have you paid any revenue on this timber you are cutting up ?

A.—In my Letmhat, it is stated that I should do like other sawyers, and as other sawyers do not pay duty on the timber they cut up, I do not see why I should pay.

19 Q.—What price do you get for your converted timber ?

A.—The same as other people get.

20 Q.—How much is that ?

A.—Boards one foot in breadth and an inch thick, Rupees 150 per 100

21 Q.—Some of the loozars may not do for boards, what will you cut them into ?

A.—I will leave them alone, and not cut them at all.

Thus taken down by me.

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

(A True Copy)

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

DOCUMENT No. 7.

Camp Phraw Village, the 22nd February 1855.

Nga Loo, a Native of this place, examined.

1 Q.—Have you any office ?

A.—Yes, I hold a situation under the Assistant Commissioner of Toungloo.

2 Q.—What is it ?

A.—Goung.

3 Q.—Is the place quiet ?

A.—Very quiet

4 Q.—Are you acquainted with the Districts all round to the East, North and South ?

A.—Yes.

5 Q.—Are there many villages to the East of this ?

A.—Yes, Kareens.

6 Q.—Are they civil people ?

A.—They are very good people.

7 Q.—To the North are there many villages ?

A.—Yes, Burman and Karen villages.

8 Q.—Are they all quiet and on good terms ?

A.—Yes, like the other villages.

9 Q.—To the South what villages are there ?

A.—Only Burman villages.

10 Q.—What is the name of the Teak Forest to the East of this, which we went to this morning?

A.—Kyouk-pathoe.

11 Q.—Did we go to the end of the Kyouk-pathoe Forest?

A.—No, only to the middle.

12 Q.—Where is the Thouk-yai-ghaut Forest?

A.—All these Forests here are called Thouk-yai-ghaut, but the different parts have different names, and Kyouk-pathoe is one of them.

13 Q.—When you said there are probably about 500 loozars in the Forest we went to this morning, did you mean in the Thouk-yai-ghaut, or did you mean in the Kyouk-pathoe?

A.—I mean in the Thouk-yai-ghaut, but there may be more, perhaps 1,000 or even 1,500.

14 Q.—How many miles are the Thouk-yai-ghaut Forests from North to South?

A.—Seven (English) miles.

15 Q.—From East to West how many miles?

A.—About nine miles.

16 Q.—Who is the Thoogyee or the head man in the District.

A.—Moung Lhine has sole management, and is interested in the timber business.

17 Q.—How is he interested in the timber business?

A.—Because Moung Lhine gets an order from the Mywoon to remove all the felled timber, and on the strength of that order he deposes Nga Shoay Goung, of Doe-thoung village, to saw the timber there.

18 Q.—But there is no felled timber that I can see.

A.—There were I think about 150 logs of old felled timber in all the Thouk-yai-ghaut Forests—he may have probably felled killed trees, but if I examine the Forests, I can soon find out.

19 Q.—But there is no difficulty in distinguishing old felled timber from newly felled timber, and I find that the timber at this place is new cut. I do not blame you, for you may probably have been directed by persons in authority to fell it and saw it up. How is it?

Hesitates to answer.

20 Q.—Whose saw-pit is that close by here, which we saw this morning?

A.—Mine.

21 Q.—By whose authority are you sawing timber?

A.—The Myowoon's.

22 Q.—Have you written authority.

A.—Yes.

23 Q.—Where is it?

Remarks by the Superintendent.—Sends for it to his house, and after great delay, says it was taken away the day before yesterday by Thetshay, his nephew.

24 Q.—Where, or to what place, or to whom has Thetshay taken the Letmhat?

A.—He has taken it to Maibyew Forest to bring down felled timber.

25 Q.—Where is Maibyew Forest?

A.—East of this.

26 Q.—How far?

A.—Six English miles.

27 Q.—How many other saw-pits besides his own?

A.—There is one in Doe-thoung village.

28 Q.—Where is Doe-thoung from here?

A.—South-west.

29 Q.—How far?

A.—One mile.

30 Q.—Are there any other saw-pits in the Thouk-yai-ghaut Forests besides your own, and one at Doe-thoung?

A.—No.

31 Q.—If any one wants converted timber, would you supply it?

A.—I would supply it to any one who would pay me for it.

32 Q.—What would you charge per 100 for inch boards?

A.—Rupees 150.

33 Q.—How many logs have you cut up?

A.—Fourteen.

34 Q.—Have you paid duty on it?

A.—No.

35 Q.—Who pays you for the converted timber you make over to the Myowoon.

A.—Nga Koon.

36 Q.—Who is Nga Koon?

A.—A Chinaman who makes payments.

37 Q.—Do you get a receipt for the timber.

A.—I have not delivered any yet.

Thus taken down by me.

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

(A True Copy)

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

DOCUMENT No. 8.

Camp Maibyeu village, 12 miles S. E. of

Tounghoo, 23rd February 1855.

Thasan examined.

1 Q.—Where do you belong to ?

A.—I am a native of Maulmain.

2 Q.—Have you been engaged there in Teak Forests work ?

A.—No.

3 Q.—How long have you been here ?

A.—Altogether about a month in the Tounghoo District.

4 Q.—Did you come direct from Moulmein to Tounghoo.

A.—Yes.

5 Q.—Who accompanied you ?

A.—Five other men besides myself, not including Nga Tsandah.

6 Q.—Nga Tsandah, who is he ?

A.—The owner of two elephants.

7 Q.—Their two elephants came with you ?

A.—Four elephants came with me, two belonging to Nga Phalone and two to Nga Tsandah.

8 Q.—What did the elephants come for ?

A.—Because they (the owners) were told that there would be employment for them to drag timber from the Forests.

9 Q.—From what Forests ?

A.—Tounghoo Forests.

10 Q.—Did they come on their own account, or for hire ?

A.—I do not know myself, but I have been told that they would work them themselves, that is, Nga Tsandah and Nga Phalone.

11 Q.—What inducement had they to come to Tounghoo ?

A.—On account of the following circumstances ; namely, on the Myowoon getting his appointment, he wrote a friendly letter to Ko-ine to come over to Tounghoo, as he could give him a situation if he wanted one ; accordingly, Ko-ine came to Tounghoo and appeared before the Myowoon and expressed a desire to become a timber merchant, as he understood the business, and in order to secure his (Ko-ine's) interests, the Myowoon, told him, that after making his arrangements with the owners of felled timber to come before him, and he would see the agreements properly drawn out. After that the elephants came up.

12 Q.—How long after that did the elephants come up to Tounghoo.

A.—About a month.

13 Q.—You said on the Myowoon's getting his appointment, he sent for Ko-ine. The Myowoon has been appointed above two years ago, you have only been here a month, what had the Myowoon's sending for Ko-ine to do with the elephants coming up.

A.—Ko-ine was coming up from Moulmein to Tounghoo and met Nga Tsandah and his party on the way, and having showed them the Myowoon's Letmhat, upon which he was going himself to turn a timber merchant, informed them that they had better come along with him, which they did.

14 Q.—What are the elephants doing now ?

A.—Two are employed in dragging timber in this Forest, and two in Maihaw or Swah.

15 Q.—Who are they engaged by ?

A.—By Shoay Gone and Nga Kwet, the latter Thoogyee of Maihaw district.

16 Q.—How much have they dragged out of the Forests ?

A.—Thirty-six loozars.

17 Q.—How much have they to drag ?

A.—The owners say about 90 or 100 loozars.

18 Q.—Where are the two elephants of this Forest now ?

A.—Taken away by the other merchants on a hunting excursion.

Thus taken down by me.

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

(A True Copy,)

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

DOCUMENT No. 9.

Toungthoo, 24th February 1855.

MY DEAR McCLELLAND,

I SEND per bearer a letter just received from Captain Brown, which will give you the state of affairs across the country to the northward. I hear also that he has captured and hanged Goung Gyie's son, so that the severe example may have the desired effect of preventing Goung Gyie's return to his old haunts.

I learn from the bearer, that you are on the Thouk-yai-gat, where, to provide for the exigencies of the public service, I have given permission to several owners of timber, who have satisfactorily proved their rights to it, to convert it into certain sizes, as plank required by the Engineer, and which they deliver on contract to him at this place. As this timber cannot under any circumstances be brought here in the log, I hope you will have no objection to the permission I have given, otherwise the Engineer's work in the building the new cantonment must stop from want of material. The Commissariat Officer has also made a demand upon me for a large quantity of material for making barrack cots, furniture, &c., and I was on the point of concluding a contract with the owners of timber now lying in Kaboung to convert it to the sizes required ; but shall not do so until I hear from you.

It escaped me to mention to you, although I had previously informed Mr. Gibson of it, and desired him to report the same to you, and as a means of securing all the available timber for the use of Government.

Yours, &c.,

(Signed) E. O'RILEY.

(A True Copy,)

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

No. 232.

To

J. TRACY, ESQUIRE,

Assistant.

Tounghoo, 1st September 1854.

Sir,

AS under the present regulation for the duty on timber, the produce of this district, it is probable that nearly the whole of the timber brought from the Forest to the north of this will be purchased by Government, I would suggest that the levying duty thereon be suspended for the present until reference to the Commissioner has been made on the subject

2. In the mean time a memo. of all logs purchased on account of Government, shall be kept in this Office, and a copy furnished you monthly, from which to average the duty in the event of its being so ordered by the Commissioner of Pegu.

I have, &c.,

(Signed) E. O'RILEY,

Assistant Commissioner.

(A True Copy,)

(Signed) J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

To

MAJOR A. P. PHAYRE,

Commr. of Pegu and Govr. Genl.'s Agent.

Sir,

WITH reference to my letter of the 8th instant, together with its enclosures, it would, in my opinion, be desirable that I should be made acquainted, as soon as possible, with your orders regarding the disposal of 119 logs of timber, seized by me at this place, as having been felled in the Forests north of Tounghoo in breach of Forest Rules.

2. The logs in question are said to be the property of Shoay Boe, MOUNG Tsau-wah, MOUNG Shoay Oung, Ko Poo, and Nga Phoo, together with seventeen logs, for which no claimants have appeared.

3. Besides the evidence collected by myself in the Forests north of Tounghoo, regarding the felling of timber, these logs present in them-

selves all the characters of new timber, upon which we have hitherto acted in the confiscation of similar property in Rangoon.

4. The evidence collected by myself in the Forests was not merely verbal evidence, but I took occasion to examine the Forests for myself, to see the timber in process of being felled, as well as felled and in process of being lopped and cut up into lozars and dragged, both to saw-pits and to the river-side, and it was only after having witnessed this in every case, that I took down written evidence on the subject, and that in the most public manner.

5. La Quay, the Thoogyee of Kcôn-oung district, only gave his evidence after the facts had been fully discovered by myself, and he then gave it voluntarily, in the presence of twenty or thirty of his people and a crowd of villagers, as well as the whole of my Forest establishment. I say this to show that there was no desire on my part, or that of my establishment, to implicate any person.

6. Under these circumstances, I confess I am reluctant to leave Tounghoo without your calling these persons together and judging for yourself of the circumstances I have brought to your notice.

7. The people are all within a day's journey of Tounghoo and may be assembled in twenty-four hours if necessary.

8. If this is not done while you are on the spot, I can see for our adoption but one of two alternatives, namely, to suspend our Forest Rules, and the collection of timber revenue, until sufficient timber is supplied for the construction of public buildings at Tounghoo, or to prohibit the use of Teak timber in the district. The latter is the course I would recommend, and, in anticipation of some such necessity, I beg to enclose copies of two letters which (in your absence) I addressed to the Brigade Major.

I have, &c.

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

OFFICE OF THE SUPDT. OF
FORESTS IN PEGU, *Tounghoo*, }
The 14th March 1855.

(A True Copy,)

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

To

CAPTAIN HAINES,

Brigade Major, Tounghoo.

Camp Prah Vill., near Tounghoo,

Dated the 24th February 1855.

SIR,

HAVING, with the permission of the Brigadier Commanding, consulted with the Executive Engineer as to the quantity of timber likely to be required for the completion of the barracks and other public buildings at Tounghoo, I am of opinion that the Forests of the Tounghoo district would not be sufficient to supply the requisite quantity of seasoned Teak timber in time for the purpose, and the employment of green unseasoned timber, such as that which is now supplied for the public works by the Assistant Commissioner, is not only expensive in itself, but very injurious to the Teak Forests, and contrary to the existing rules and orders of the Commissioner.

2. I would therefore propose that arrangements be entered into, as early as possible, for meeting this difficulty, and I am happy to be able to state, for the information of the Brigadier Commanding, that the Forests on every side in the vicinity of Tounghoo are rich in timber of various kinds that will I hope be found efficient substitutes for Teak in the completion of all the public works connected with the new cantonments, so that the interruption in the supply of Teak will be attended, I hope, with but a slight and temporary inconvenience.

3. In a Teak Forest called Kyouk-paton, about three or four English miles to the east of Prah village, *Saul* is found of large girth to a considerable extent, though not sufficient to supply all the timber that will be required by the Engineer. This timber is scarcely less valuable than Teak itself, being employed almost exclusively in Bengal for military purposes and house-building : it is the *Shorea robusta* of Botanists and the Eing-gyeen of the Burmese.

4. The next perhaps in importance is the Eing, it belongs to the same natural family with the foregoing, and is the *Dipterocarpus alatus* of Botanists ; it is found in inexhaustible abundance to the north as well to the east of Tounghoo ; it is of all sizes, from that of a house

post to six feet in girth. The Eing Forests to the north of Tounghoo are almost four or five miles distant on the road to Swah. Like Eing-yeen, it answers for posts, beams and boards.

5. Pyin-kadoe, or *Inga xylocarpa* of Botanists, is now coming into general use at Rangoon, to which place it is brought from a distance of thirty or forty miles, and sold at one Rupee to one Rupee eight annas a log; but it is a smaller timber in the Rangoon district than is here, where it often rivals Teak in girth and surpasses it in length and straightness. This tree is found East, West, North and South in all the Forests throughout the province, but is generally largest where Teak grows, but is much more common than Teak.

6. Oung-doane, or *Pentaptera glabra* of Botanists. This tree is likewise very common in every direction, it is generally a large tree growing with the Eing and Pyin-kadoe, and is equally applicable to all house-building purposes.

7. The names of these four most valuable timber trees are herewith annexed, written in the Burmese character, to prevent mistakes, and I would earnestly recommend immediate steps to be taken for procuring a sufficient supply of timber from these sources in anticipation of the sanction of the Commissioner and the Chief Engineer.

I have, &c.,

(Signed) J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

OFFICE OF THE SUPT. OF
FORESTS IN PEGU, *Tounaghoo*,
The 24th February 1855.

(A True Copy,)

(Signed) J. McCLELLAND,

Offg. Supdt. of Forests, Pegu.

FROM

THE OFFICIATING SUPT. OF FORESTS IN PEGU,

To

CAPTAIN HAINES,

Brigade Major, Tounghoo.

Dated Tounghoo, the 28th February 1855.

SIR,

IN continuation of my letter, under date the 24th instant, I have the honor to state for the information of the Brigadier Commanding, that there is a fifth kind of timber (in addition to the four already mentioned) admirably adapted for public works, in lieu of Teak, found in great abundance in logs of gigantic size on the banks of the Sitang, near the village of Kareen, on the east bank of the river, sixteen miles above Tounghoo.

2. The timber in question is called Touk-kyan by the Burmese, and is *Pentaptera arjuana* of Botanists, is nine feet in girth and fifty feet in length and upwards, and admirably adapted for flooring boards, sheathing boards and rafters, with the advantage of being an easy timber to work.

3. Should it be thought expedient or necessary to employ this timber in the construction of public buildings at Tounghoo, it might be felled and sawn up on the spot where I have a resident Goung-gwai at Kareen village, named Ko-youk-kyee, who would take care and be responsible to me, that the persons sent by either the Commissariat or the Executive Engineer to fell and saw up the timber for the public purposes did no injury to the Teak Forests.

4. If this timber be felled now, and sawed up at once into boards, and the boards be stacked on their ends in the usual way as they are sawn, they will have time enough to season before the commencement of the ensuing rains.

I have, &c.,

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

OFFICE OF THE SUPT. OF
FORESTS IN PEGU, *Tounghoo,*

The 28th February 1855.

(True Copy,)

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

To

MAJOR A. P. PHAYRE,

Commr. of Pegu and Gov. Genl.'s Agent, Tounghoo.

Dated Tounghoo, the 15th March 1855.

SIR,

I REGRET that a return of fever yesterday, evening prevented my seeing you as you requested.

2. I quite agree with you that we should deal leniently with the Kareens, but the Forests north of Tounghoo are not in their hands, not even the Koon-oung Forest; and, the person La Quay, alluded to in my letter of yesterday's date, though originally a Kareen, is a naturalized Burman, and all the indulgence either he or the Kareen's desire is to be employed to fell timber over the Forests they claim no right whatever, and, when informed by me that their felling timber without the sanction of the Forest Department was illegal, they submitted to the order and declared they would fell no more, but would consider it a hardship if not allowed to remove what they had already felled, and this is the only Forest north of Tounghoo that the Kareens have any connection whatever with.

3. The infringement of Forest Rules has not however been confined to the Forests north of Tounghoo, as you will perceive by the 12th para. of my letter of the 8th instant, but has been extended to the Thouk-yai-gat, one of the Southern Forests, where saw-pits have likewise been erected and authority given to cut up and remove timber (*vide* documents Nos. 9, 10, 11 and 12,) and where we found elephants without responsible owners employed in the removal of green felled timber (*vide* document No. 8.) These elephants are still in the Forest close to Tounghoo, only awaiting our departure in order to return to their work.

4. I have thus done my duty in bringing these circumstances to your notice, and should you still have any doubt on your mind as to the course to be pursued, I have only to request that the whole of the correspondence, may be submitted for the orders of the Government.

I have, &c.

(Signed) J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

OFFICE OF THE SUPT. OF
FORESTS IN PEGU, *Rangoon,*
The 15th March 1855.

(True Copy,)

(Signed) J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

To

MAJOR A. P. PHAYRE,

Commr. of Pegu and Govr. Genl.'s Agent.

Camp Thabyaywah, 7th March 1855.

SIR,

I HAVE the honor herewith to enclose Statements Nos. 1 and 2, regarding felled timber in the Khaboung Forest, showing that Moung Phai Myo, Thoogyee of this district, now in your camp, is concerned in the felling of Teak timber, of which I can bear witness myself as having seen some of the timber thus illegally felled as it was dragged to the water's edge and the fresh stumps of several trees that have been dragged away.

2. I may add, that I have understood from Mr. O'Riley, that this man Moung Phai is the owner of six or eight hundred logs of felled timber in this Forest, and I must say that it is impossible for me to protect the interests of Government, if persons in Moung Phai's position are thus allowed to trade in timber, as the whole of the people in this district are corrupted by his influence and example, so that I cannot expect to get the slightest assistance or one word of truth from them, as for example the evidence of Nga Hunie, (document No. 1,) which is a complete evasion of what he voluntarily stated in my presence only a few hours before, as proved by Moung Youk's statement, and that of Mr. Fernandez (document No. 2.)

I have, &c.

(Signed) J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

OFFICE OF THE SUPT. OF
FORESTS IN PEGU, *Toungthoo,* }
The 17th March 1855.

(A True Copy.)

(Signed) J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

DOCUMENT No. 1.

Camp Thabyaywah, on the Khaboung Choung,

17th March 1855.

Nga Humie.

1 Q.—What village do you belong to ?

A.—Thabekway.

2 Q.—Are you well acquainted with the Khaboung Forests ?

A.—No.

3 Q.—Do you remember the last time we went into the Forest this morning ?

A.—Yes.

4 Q.—How many logs of timber did we see on the banks of the Khaboung at that place ?

A.—I saw some logs, but I don't remember how many.

5 Q.—When were they cut ?

A.—I think they were felled after this last rains.

6 Q.—By whom ?

A.—I do not know.

7 Q.—By whose order ?

A.—I can't say.

8 Q.—What house did we see at the place where the timber was cut ?

A.—A shed for the coolies.

9 Q.—What coolies ?

A.—I think it was the timber-cutter's shed.

10 Q.—What timber-cutter's ?

A.—Moung Koo was one of the parties ; he resides in the village of Dwajee.

11 Q.—What kind of timber did he cut ?

A.—Don't know.

12 Q.—What kind of timber did you see what was cut this morning ?

A.—Teak. I also saw besides the logs a few stumps.

13 Q.—Who do the logs belong to ?

A.—Myo Thoogyee Moung Phai ?

14 Q.—Where is he ?

A.—He is here now with the Commissioner.

15 Q.—Has MOUNG PHAI any more felled timber in the Khaboung Forest ?

A.—I can't say.

16 Q.—What are the names of the wood-cutters that did not receive their pay from MOUNG PHAI for felling timber as you told us this morning ?

A.—MOUNG OU is one; I don't know the others.

17 Q.—How much is due him ?

A.—I cannot say.

18 Q.—By whom is the sum payable ?

A.—By MOUNG PHAI.

19 Q.—Whose buffaloes dragged the timber ?

A.—I can't say.

20 Q.—You say you saw some stumps, who cut those trees ?

A.—I heard it was the MYO THOOGYEE who cut the timber, but I don't know of my own knowledge.

Thus taken down by me, on the day, month and year first above written.

(Signed) J. McCLELLAND,
Offg Supt. of Forests, Pegu.

(A True Copy.)

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

DOCUMENT No. 2.

Camp Thabyaywah, on the Khaboung Choung.

17th March 1855.

MOUNG GOUK examined.

1 Q.—Were you present this morning when we examined the timber on the left bank of the Khaboung Choung ?

A.—Yes.

2 Q.—Do you remember what our guide Nga Humie said on that occasion ?

A.—On being asked by you who the three logs pointed out by you belong to, the guide said it was the property of the MYO THOOGYEE MOUNG PHAI, who felled the timber, because the MYOWOON wanted it.

3. Q.—When did Nga Humie say the timber was felled ?

A.—During the last rains.

4 Q.—Did Nga Humie say any thing in your hearing about sums of money still due to several parties for felling timber ?

A.—He voluntarily stated there were several parties who were not yet paid by the Myo Thoogyee for felling timber.

5 Q.—You saw the logs on the left bank of the Khaboung above alluded to ; what is your opinion as to their being new or old ?

A.—It is new timber.

6 Q.—Could you swear it is new timber ?

A.—I can take my oath it is.

Remarks by the Offg. Supt. of Forests.—Mr. C. Fernandez appears before me, and states that he has heard Mounng Youk's evidence, and as he was present on the occasion referred to himself, can declare it to be correct.

(Signed) C. FERNANDEZ.

Thus taken down by me, on the day, month and year first above written.

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

(A True Copy.)

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

To

J. McCLELLAND, ESQUIRE,

Supt. of Forests, Pegu.

Dated Kyet Shah, 20th March 1855.

No. 10, FOREST.

SIR,

I HAVE the honor to acknowledge the receipt of your several letters and their enclosures noted in the margin, regarding the very serious damage which has been done to some of the Teak Forests in the Tounghoo district by unseasoned timber having been lately felled. These letters have remained unanswered until now, because I wish to ascertain, first, what was the state of affairs as regards Teak timber in the Khaboung stream, up which I have been proceeding, and also because from your illness I was not able to see you on this subject in

Supt. of Forests in
Pegu to Commr. of Pegu,
dated 8th March 1855,
with enclosures, marked,
1 to 12.

From the same to the
dated 14th March
1855, with enclosures.

From the same to the
dated 15th March
1855.

From the same to the
same, dated 17th March
1855.

the station of Tounghoo. The Kareen Thoogyee of Koon-oung named Nga La Quay having been specially deputed to proceed with Major Allan in making the boundary east of the Sitang, it was not practicable for me to call and examine him as suggested by you.

2. From your letters it appears as follows :—

That north of Tounghoo timber has been lately felled both on the Tswa River and in the Koon-oung district, and to the south on the Thouk-yai-gat and Khaboung streams.

3. On the Tswa river, you saw twelve loozars, some of which appeared to belong to trees felled in a green state. You also saw some seasoned trees just felled with the branches still unlopped ; some of this timber was felled by one Moung Hnyeen, who states he was employed to do so by one Moung Pan Yai, an inhabitant of Tounghoo, who had authority from the Assistant Commissioner. This however was denied by Moung Pan Yai, whom you examined at Tounghoo.

4. In the Koon-oung circle, on the East bank of the Sitang, you met the Thoogyee La Quay, who is a Kareen, and he informed you he had authority from the Assistant Commissioner to fell Teak timber in his circle, and that he had felled 300 logs.

5. It does not appear that timber has been lately felled in any other portion of the Forests north of Tounghoo, except the above two circles. The timber so felled has been done in direct contravention of existing orders. The authority to fell, stated by some people whom you questioned to have been given by Mr. O'Riley, the Assistant Commissioner, is not borne out by the document they exhibited. These all refer to bringing away timber felled under the Burmese Government. In the case of the Kareen La Quay, Mr. O'Riley informs me that he gave no orders or permission to fell timber. Indeed it is quite incredible that he would. Mr. O'Riley informed sundry people that they were at liberty to bring away old felled timber, and he received it as it was brought for the Department of Public Works, and some also it appears for the Commissariat. It is to be regretted that he did so, as every thing regarding the working of the Forests and the collection of the revenue should have been left entirely to your Assistant to deal with. Mr. O'Riley will be informed accordingly as a guide for the future, and he requested once more to warn all Thoogyees and others against unauthorized felling of timber, but to give every support to your department when applied for.

6. It is a very difficult question to decide how the felled timber in Koon-oung is to be disposed of. The Notification of the 21st of November last gave all persons possessing old felled timber in the Tounghoo Forests, north of the City of Tounghoo, up to 1st January 1856, to bring it away. This is consistent with justice, in order that person's property may not be confiscated, and at the same time that the Forest may come under entire Government control within a reasonable period. The same privilege would at the same time have been extended to the Forests south of the City of Tounghoo, but I at that time was informed that there was not much felled timber in those Forests and that the owners had possessed better opportunities during 1853 and 1854 of bringing what there was away than those to the north. Mr. O'Riley, however, informs me, that this is not the case; that the obstacles to the removal of timber, partly arising from the disturbed state of the country and partly from the want of buffaloes to drag the logs, have been perhaps even greater to the south than to the north. Under these circumstances, to prohibit at once the removal of old felled timber from the southern streams, would amount to an act of spoliation, which would be quite unjustifiable. The latter part of the Notification, of 23rd November 1854, must therefore be modified, but with stringent checks to prevent waste and destruction.

7. One great difficulty in adjusting this matter arises from the fact, that under the Burmese Government, the local Officers (*i. e.* the Thoo-gyees of circles) were, so to speak, the lords of the manor and received a fee on each tree felled. They alone gave permission to fell Teak trees; Teak trees were to them in fact a property held in virtue of their offices, and a number of the inhabitants of each circle were generally interested in the killing of the trees and sometimes in the dragging of them. This consideration will show at once the great obstacles which have to be overcome in preserving the Forest, since an important privilege of the Thoo-gyees has, under the British Government, been abrogated. Still it is necessary to put a stop to the waste of the Teak Forest, and they must at once be guarded against destruction and the rights of the British Government therein indicated. But at the same time, it will not be expedient, nor would it be just, at this early period of our rule, and while people's minds are scarcely yet settled down to the change of masters, suddenly to treat as delinquents those who can scarcely all at once cease to deem that their own property, which all their lives they have practi-

cally regarded as such, and which for generations past has been so treated. With respect to La Quay I make every allowance for his being a Kareen, and although you state that he is a naturalized Burman, I have seen and conversed some time with him, and I assure you, you have been misinformed in this particular. He and his people are in race and language, and feeling Kareens. I do not wish to condemn him without a hearing, which there has not been opportunity of giving him, I will not therefore order the confiscation of the timber from this circle, and as the green timber said to have been cut in the other Forests, north of Tounghoo, namely, on the Tswa, is too small a quantity to call for any general measure other than what exists already, and it is necessary to dispose of this subject without delay, I direct that what has been cut, be allowed to be brought down to Tounghoo and sold to the Executive Engineer, under Rule VII. of the Rules dated the 7th July 1854. But in allowing this, I rely upon the vigilance of your department in the Forest of Tswa and Koon-oung, preventing any more timber being felled, or instantly reporting any they may find, and stamping it at once, in order that it may be recognized and not be allowed to pass under the permission here given for what has already been cut. This permission extends also to the 119 logs referred to in your letter of the 14th instant, the whole of which appears to have come from the Koon-oung circle. With the exception, then, of what may be cut hereafter, the whole of the felled timber now in the Forest north of Tounghoo may be brought down for sale to the town of Tounghoo. Old timber may of course, at the discretion of the owners, be carried elsewhere after payment of duty thereon.

7. With respect to the timber which is in the streams to the south of the City of Tounghoo, namely, the Thouk-yai-gat, Klaboung and others, as it is stated that there is a quantity of *bona fide* old felled timber therein, I request you will proceed as follows :—

You will place at the mouth of each stream an establishment sufficient to overhaul the timber when brought down. That which is old timber, or even doubtful, should be passed for duty and allowed to be carried away where the owners please as soon as possible. That which is clearly new should be detained, and in order that I may be kept informed of the number of logs seized, I request you will have the goodness to send me monthly a statement on this head, in the form accompanying, and I request no final order for the confiscation of any of this timber

may be given without my sanction. Should any additional establishment be required to carry out these orders, the same may be entertained, a separate bill being submitted for the expenses, in order that I may obtain Government sanction thereto.

8. I believe I have now entered into every material particular referred to in your letters under reply, except that of the substitution of Saul, iron-wood, or other timber for Teak in the public buildings. I fully agree with you in your general views on this subject, though I doubt the propriety of using such a wood as Eug. It has the character of decaying in seven or eight years, unless very carefully preserved from moisture, and if used as posts in the ground, it appears to be impossible to prevent the damp acting upon it.

9. The Assistant Commissioner of Tounghoo has, with the view of supplying the Department of Public Works, entered into arrangements with the Burmese authorities across the border to supply 3,000 logs. With this and what is already available, and the other descriptions of timber mentioned in your letter, I anticipate that the supply for the public works will be ample. I have also written to the Assistant Commissioner and to the Collector of Customs at Tounghoo to be careful that no timber from the district is smuggled into the town as foreign. I request you will also instruct your Assistant at Tounghoo to be vigilant in this matter.

10. I will be obliged if you will inform me how you would suggest that the revenue due upon the timber already furnished to the Executive Engineer at Tounghoo should be adjusted.

11. Finally, I request you will issue the necessary orders to your Assistants at Tounghoo in this matter without delay, in order that the timber north of Tounghoo may be available for the public works and owners may be relieved from their present state of anxiety.

I have, &c,

(Signed) A. P. PHAYRE,

Commr. of Pegu and Agent to the Govr. Genl.

PEGU COMM'R.'S OFFICE ;
Kyetchah,
The 20th March 1855. }

(A True Copy.)

(Signed) J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

at the mouth of the
STATEMENT of Timber seized as fresh felled during the month of
streams running in the Sitang River South of the Station of Tounghoo.

NAME OF STREAM.	Number of logs seized.	Number of planks, rafters, &c.	Stated owners, or owners.	REMARKS.

*Pegu Commissioner's Court, Meugyee, District of Tharawaddy,
May 26th, 1855.*

Present :

A. P. PHAYRE,

Commr. of Pegu and Agent to the Govr. Genl.

REVENUE MISCELLANEOUS CASE, No. 21, of 1ST QUARTER, 1855-56.

*Petition of Messrs. J. H. Fowler and Frank H. Marshall, Merchants,
of Rangoon.*

Read this Petition.

Read also Report thereon by the Assistant Commissioner of Tharawaddy, contained in letter No. 5, dated the 25th of May 1855.

The gist of the petition appears to be that Foresters in Tharawaddy are not allowed to cut their timber into suitable sizes for removal.

Whatever regulation on this head may be introduced, hereafter the Commissioner never intended the rule to apply to felled timber *bonâ fide* private property—timber which, under the Notification quoted by the petitioner, parties are allowed to remove.

The Assistant Commissioner of Tharawaddy also reports that “there is no restriction whatever to people carrying away or cutting up timber belonging to them into any dimensions they think fit.”

The only restriction is on fresh felled timber.

The petitioners therefore may be assured that they will meet with no obstruction in the removal of old felled timber *bonâ fide* private property, or should such be offered by any person, the Assistant Commissioner will afford immediate redress.

(Signed) A. P. PHAYRE,

Commr. of Pegu, and Govr. Genl.'s Agent.

(True Copy of a Copy.)

(Signed) J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

No. 17.

To

J. McCLELLAND, ESQUIRE,
Supt. of Forests, Pegu.

Dated Rangoon, the 6th June 1855.

SIR,

I HAVE the honor to acknowledge the receipt of your letter, No. 404, dated the 4th June, being a Report on the petition of Moung Kyo and others. I request you will have the goodness to return that petition, as it is a document belonging to my office.

2. I take this opportunity of transmitting to you copy of a proceeding issued by me while in the Tharawaddy District, on the petition of Mr. F. H. Marshall, who complained that his people were prevented cutting his timber into suitable lengths to enable them to bring it away.

I have, &c.,

(Signed) A. P. PHAYRE,

Comr. of Pegu, and Agent to the Govr. Genl.

PEGU COMM'R'S OFFICE; }
Rangoon,
The 6th June 1855.

(True Copy,)

(Signed) J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

(COPY.)

No. 18.

No. 1.

To

THE SUPERINTENDENT OF FORESTS,

Rangoon.

SIR,

I HAVE the honor to acknowledge the receipt of your letter No. 17, dated the 29th ultimo.

2. In your 2nd para. you state that it will be necessary to refuse the admission of private claims to felled timber in the Illains, Thoungyeen, and Pegu River Forests, from the 1st January 1854. This must however only apply to felled timber now found within these limits of those

Forests,—since hitherto persons have not been prohibited from removing felled timber from the Forests, and no proclamation of the registry alluded to by you has been made. In fact, as time was given for persons to remove from the Forests timber, it was supposed, they had a claim to, as their own property, it would not now be fair to deny that claim on the mere fact of their having taken away the timber subsequent to the date of a registration regarding which no public notice (as far as I know) has been given.

3. I will have no objection to your withholding the publication of the tariff annexed to my Memorandum, and transmitted to you with my letter No. 16, of the 18th ultimo, until the order of the Most Noble the Governor General in Council can be received, should you consider that no public loss and inconvenience will result from the delay.

4. A copy of your letter now under reply will be submitted for the information of the Most Noble the Governor General in Council.

I have the honor to be, &c.,

(Signed) A. P. PHAYRE,

Commissioner.

BASSEIN, }
The 5th June 1854. }

(True Copy.)

(Signed) A. P. PHAYRE,

Commr. of Pegu and Agent to the Govr. Genl.

(Copy.)

No. 67.

No. 2.

To

THE SUPERINTENDENT OF FORESTS IN PEGU,

Rangoon.

SIR,

I HAVE the honor to acknowledge the receipt of your letter No. 252, dated the 1st instant, conveying your opinion on the subject of permitting the removal of felled Teak timber from the Forests of Tharawaddy and Tounghoo.

2. You consider that by allowing persons to take away such timber, there will be a general scramble for it in those Forests; that the measure

would not protect the rights of property nor benefit the interests of the timber trade, and that the only parties who would profit by it would be those who never had any property at all, either in the Forests or elsewhere.

3. It is very evident, that as regards felled timber lying in the above Forests, there are some persons, either within or beyond our frontier, who have a right of property therein, provided it was cut before Pegu became a British Province. It is only right and proper that such persons should be allowed to remove their property. To grant that permission, then, is the primary object, and the interests of the timber trade are altogether secondary.

4. The Forests of Tharawaddy and Tounghoo have hitherto been nearly sealed up. The country adjoining them has been in too unsettled a state for people to bring away their timber. The owners have not therefore had the same opportunities for saving their property which were afforded to proprietors of felled timber in the Southern Forests. In those tracts people were by sufferance allowed to remove felled timbers up to 30th May 1854, that is, during seventeen months from the date of annexation. Yet from this privilege having been accorded merely by tacit sufferance, and not from public and positive enactment and notice, the evil you refer to chiefly resulted, that, namely, of persons, who never had any property in timber, taking possession of what was unclaimed. I am now satisfied that some owners of felled timber, in the Southern Forests, omitted to bring it away because no previous notice promulgating the intentions of Government on the subject was issued, and they hoped to have a definite period granted to them to admit of their removing it.

5. As a partial remedy to this state of affairs, you propose, should owners really exist, that they be invited to send in their claims between this and the 30th of May next. The owners of felled timber in the Tharawaddy and Tounghoo Forests probably live in their vicinity, and have had but little intercourse as yet with the British authorities. I have no faith whatever that a Notification regarding claims to timber would ever reach them, and even if it did, have no faith at all that the claims could be efficiently inquired into and decided within the period named. The process would be unsatisfactory and vexatious to the

owners of timber, and would altogether fail in the main object, that of separating the true claims from the Shan.

6. For the reasons stated above, I consider the best solution of the difficulty to be that of giving an ample period, or about twelve months, for allowing people to bring away timber lying felled within the limits of the Tharawaddy and Tounghoo Forests. No doubt some persons will under that permission drag away timber which has no owners present in the country and which properly belongs to Government as unclaimed property, but the far greater evil of confiscating the property of poor and honest men will be avoided and a fair opportunity be given to all, either to bring away their own property, or to sell it to others who have the means of removing it. By this measure the owners of felled timber may, if they please, retain their property: without this plan they cannot possibly do so. The right course, therefore, in the matter is evident. On these grounds I consider it proper to grant that authority to remove timber from the Tharawaddy and Tounghoo Forests which was declared necessary by the Notice of the 30th of May 1854.

7. For the present all timber will be liable to the new rates of duty, unless circumstances show the equity of a partial reduction in particular cases.

8. You are requested to report to me the proper limits of the Tharawaddy and Tounghoo Teak Forests as soon as you can ascertain them by personal inspection or otherwise.

9. I herewith transmit a notice upon the above subject, which I request you will have the goodness to publish as soon as possible, and to have it translated into the Burmese language and printed off for general information.

10. I deem it proper to add that I do not recognize the right of property of individuals to killed timber standing in the Forests.

I have the honor to be, &c.,

(Signed) A. P. PHAYRE,

Commissioner.

RANGOON,
The 3rd November 1854. }

(True Copy,)

(Signed) A. P. PHAYRE,

Commr. of Pegu, and Agent to the Govr. Genl.

(COPY.)

No. 3.

Memo. with reference to the Letter, and its accompanying Documents, of the Superintendent of Forests.

1. THE statements made to Dr. McClelland by the Thooogyec of Koonoug (La Quay,) to the effect that he had received a written order from me to cut the timber he states having been brought to my notice personally by the Superintendent of Forests, I at the time gave an unqualified denial of any such authority having been given, and requested information of a particular nature on the subject to enable me to bring the man and others forward to answer for their conduct. This was not afforded me, but a sweeping assertion was made by him that the system was general throughout the lower streams of the Sitang, implying that such was done by my agency. I can only repeat here the denial I then made, and refer to the Tseet-kay through whom the orders regarding Teak timber were principally given for their nature. It will be more satisfactory to obtain from La Quay a statement of the information he is represented as having given to the Superintendent of Forests, which shall be done as early as possible after the service he is now employed in with Major Allan is completed; but I would here remark, that as the Superintendent of Forests has possessed himself of all Letnhats given by me to parties having timber at certain places, conveying a permission to convert it for the purposes of Government, that the order given, as stated, to La Quay and others to cut timber, should in all justice to me have been produced.

2. Letnhats in English given me to the same effect as the above :

The only documents written in English, and given to owners of timber in the Forest, that I can bring to my recollection, were occasional notes to the Forest Assistant, Mr. Gibson, to examine the claim for certain timber lying in the Forest, said to be the property of the claimant.

3. Permission given to the owners of timber to convert it on the spot into plank for delivery to the Engineer at this place :

My private communication to Dr. McClelland, in explanation, renders unnecessary any further remark here. My motive in doing so was, as there explained, simply that of meeting the exigencies of the service at this place, instead of allowing the timber to find its way out of the District. On all occasions of providing this permission the order provides also for its being proved to be the property of the claimant, under the

supervision of the Forest Goung, for whose conduct I am in no way responsible.

4. With reference to the charge made by the Superintendent of Forests, that I have usurped his functions in regard to the levying duty on timber, &c., evinced a reckless disregard of the existing regulations. “

I disclaim all intention of having so acted. The matter of payment of duty on timber purchased for the use of Government being one of a mere transfer in account, I considered that it could be done at any future period, after reference had been made to the Commissioner, and for this purpose furnished the Assistant with a monthly memo., upon which ultimately the duty could be arranged.

Urgent requirements for the public service, and an imperfect and inefficient Forest establishment, may undoubtedly have been the cause of much irregularity in this respect, and a fair consideration of these circumstances on the part of the Superintendent of Forests would have spared me the infliction of a charge of so serious a nature.

5. My recommendation to owners of elephants to bring them up here for working the Forests, with several applications from parties in Maulmain for employment for the elephants, and knowing that there is a very large amount of felled timber in the Forest belonging to natives, I gave a general reply to all applicants, to the effect that I had no doubt but good employment for the elephants could be had, in which I could see neither infringement of Forest Regulations or impropriety of action on my part.

The Notifications from the Forest Department received by me have been invariably given the greatest publicity to, both in the place and in the District; and if any such irregularities as those complained of have occurred, I am surely not to be held responsible for the inefficiency of a Department over which I have no control.

(Signed)

EDW. O'RILEY,
Assistant Commissioner.

TOUNGHOO, }
The 12th March 1855. }

(True Copy,)

(Signed) A. P. PHAYRE,
Commr. of Pegu, and Agent to the Govr. Genl.

(COPY.)

No. 47.

No. 4.

To

MAJOR A. P. PHAYRE,

Commr., and Govr. Genl.'s Agent,

Toung-hoo.

Dated Toung-hoo, the 15th March 1855.

SIR,

WITH reference to the notice of the Superintendent of Forests, dated 21st November, and received by me on the 9th December last, I regret to observe that an oversight was made by me as regards the removal of timber from the Forests to the South of Toung-hoo.

2. Under the impression that all timber in the Toung-hoo Districts, felled previous to our occupation of the country, enjoyed equality of privilege in its removal, I had, previous to the receipt of the notice in question, granted permission to owners of felled timber on the Thouk-yai-ghaut to convert it on the spot for purposes of Government, and omitted to rescind the permission so given, from the oversight in question, which was induced by the knowledge that the causes which operated to prevent the owners of timber from receiving it in the Forests to the North of Toung-hoo, had an equal effect as those to the South of this. In some localities, in fact, the loss of buffaloes from disease, and plunder by dacoits, to which may be added the general interruption of all undertakings in consequence of the disturbed state of the country for a considerable period after our arrival here, was more severely felt to the South of Toung-hoo than to the North, and thereby prevented the removal of the timber.

4. I again repeat my extreme regret, that much irregularity has prevailed in the Forests of this District generally, the consequence of an imperfect system of supervision; but for the future, through the Agency of good "Goung-gwais" and the continued supervision of the Forest Assistant, I have no doubt but that the Forest Rules can be strictly

observed ; and I need scarcely add that every possible assistance to that end shall be afforded by me.

I have the honor to be, &c.,

(Signed) E. O'RILEY,
Assistant Commissioner.

(True Copy)

(Signed) A. P. PHAYRE,
Commr. of Pegu, and Agent to the Govr. Genl.

(COPIES.)

No. 58.

No. 5.

To

MAJOR A. P. PHAYRE,
Commr., and Governor General's Agent.

Dated Tounghoo, the 21st March 1855.

SIR,

THE Kareen Tso-kay of Koon-oug, Lay Quay, having presented himself yesterday, I took the opportunity of examining him with regard to the charge made against him by the Superintendent of Forests for a breach of the Forest Regulations.

2. The investigation, both in Burmese and English, annexed, will serve to show that an error has in all probability been made in the meaning attached to the Tso-kay's statements, as recorded by the Superintendent of Forests, otherwise a perversion of that meaning has been made by the interpreter, which may require explanation.

I have the honor to be, &c.,

(Signed) E. O'RILEY,
• *Assistant Commissioner.*

(True Copy)

(Signed) A. P. PHAYRE,
Commr. of Pegu, and Agent to the Govr. Genl.

(COPY.)

No. 31 OF 1855.

Assistant Commissioner's Court, Tounghoo, the 20th day of March 1855.

Present:

EDWD. O'RILEY,

Assistant Commissioner.

EXAMINATION of the Tso-kay of Koon-oug, Lay Quay, with reference to an alleged breach of the Forests Regulations, in cutting Teak timber in his circle.
Miscellaneous,
Tso-kay Lay Quay, called.

Q.—Did you meet the Superintendent of Forests in your circle ?

A.—I did.

Q.—What was the nature of the questions put by him ?

A.—He asked me if I had been cutting timber ; to which I replied that I had been cutting Teak, a part of which was in the river, and a part still in the jungle. He also asked me when I cut the Teak in question, about 250 logs. I told him that it was cut during the months of Thadeeng (October,) Gwat-ta-tsoung-Moung (November,) Na-Dan (December). By *cutting*, I mean that it was cut into short lengths during those months, which I explained to the interpreter of the officer. He also asked me by whose order I had cut this timber, and I replied that I did so by order or permission of the Myowoon, who gave me a verbal order to that effect. He asked me to give him a man to act as Forest Goung, and I told him there was none in my village who would take the employment. I offered myself for the situation, but he said that as I was the Thoogyce, the place of Goung could not be held by me. I also pointed to a loozar I had near my house in process of cutting up, and told him that as it was rotten in the centre it was of no use as a log, and that I cut it up to make into plank.

I explained to the interpreter, that all the wood belonging to me was not felled since the English came into the country, *but some five or six years ago*, and that it had been lying in the Forest ever since. I am certain that I explained this to the interpreter, and he I suppose did so to the officer. I was asked to furnish a list of green and dead trees in the Forest, but having received orders not to touch the standing trees,

I replied that I was unable to do so. This is all that passed between us to the best of my recollection.

Q.—Have you received any orders from this Court regarding the Forests?

A.—I received an order, in Wah-Tso last year, to the effect that all trees standing in the Forests, whether killed, nat-that; or living, were on no account to be touched, and that persons found doing so would be punished. This was made known to all my people, and no one has cut a single tree to my knowledge.

Q.—Did you ever meet the late Assistant in the Forest Department, Mr. Gibson?

A.—Yes, he came to my house in Ta-tsoung Moung (November) last.

Q.—What were his orders to you?

A.—He told me that we were at liberty to take away all timber belonging to us lying on the ground, but that all the standing trees were the property of Government.

Q.—Have you received any orders from the Myo-oke-oo-Ban regarding the Forests?

A.—Yes, to the same effect as that from the Court; I also received a copy of the proclamation, which I hung up in the village, and it is there now.

Q.—How many trees had you lying in the Toungyas before the English came?

A.—About two hundred.

Q.—How many loozars would these trees give when cut up?

A.—Four hundred at least.

Q.—Will you take your oath, that since the English came you have not cut a single standing either living or dead?

A.—I am ready to take the oath to that effect. Why should I go to the trouble in felling trees when I had so much ready on the ground or cut green trees, which are of no use.

Q.—Have you heard of any one cutting timber in the Forests either in those in your locality or elsewhere?

A. I have not; such has not been the case in the Forests in Koon-oug.

The above having been read over, Lay Quay acknowledges its correctness, and states his willingness to swear to its truth.

(Signed) _____
„ E. O'RILEY,
Assistant Commissioner.

Witnesses,
(Signed) _____

ORDER.

THE above examination will be placed on the records, and a copy of these proceedings be sent to the Commissioner of Pegu for his information.

(Signed) E. O'RILEY,
Assistant Commissioner.

(True Copy,)

(Signed) E. O'RILEY,
Assistant Commissioner.

(True Copy,)

(Signed) A. P. PHAYRE,
Commr. of Pegu, and Agent to the Govr. Genl.

(COPY.)

No. 6.

No. 40 of 1855.

Toungthoo, the 24th day of March 1855.

Present :

EDWD. O'RILEY,
Assistant Commissioner.

READ statement of

Miscellaneous.

(A.) Moung Shwa Nyo.

(B.) Nga Kyu.

(C.) John Pearce, relating to the subject of green

Teak timber having been supplied to the Executive Engineer, as stated by the Superintendent of Forests.

ORDER.

THE above statements will be appended to these proceedings, and copy forwarded to the Commissioner of Pegu for his information.

(Signed) EDW. O'RILEY,
Assistant Commissioner.

(True Copy,)

(Signed) EDW. O'RILEY,
Assistant Commissioner.

(True Copy,)

(Signed) A. P. PHAYRE,
Commr. of Pegu, and Agent to the Govr. Genl.

(COPY.)

A.

Toung-hoo, 24th March 1855.

Present :

EDW. O'RILEY,

Assistant Commissioner.

Examination of Moung Shwai Nyo regarding Teak timber.

Q.—What was your occupation under the Burmese Government?

A.—I was the Theet-kon Thai Gyee, or head timber merchant.

Q.—How long did you hold that appointment?

A.—For a period of ten years.

Q.—During that time what quantity of timber were you in the habit of obtaining annually?

A.—From the lowest number of logs, 500 to 1,000 per annum.

Q.—What kind of timber was it you thus supplied?

A.—Yuests (Masts), (Hluai) Short Logs, (Doo) Long Logs, (Lests) Logs of 35 touns length, with unequal thickness.

Q.—Was any duty paid on this timber on its arrival here?

A.—None, the duty was paid on its arrival at Rangoon.

Q.—From what portion of the Forests was this timber procured?

A.—Chiefly from the Upper Tswai (Tseing Kng.), also from Beinbyai and also from Koon-oug Nga Kyat Kng.

Q.—Was the timber from the above places cut near the main stream (Poung-loung) ?

A.—No, it was cut at a distance of from 1 to 3 Tseings (6 miles) and upwards from the Poung-loung (Sitang.)

Q.—Has there been any Teak timber near the mouth of the Tswai, or in the vicinity of the Sitang on the banks of other streams, during the past ten years ?

A.—None, but trees that were not worth cutting from disease or other defects, and those were small in number.

Q.—In which of the streams was the largest quantity of timber cut during the last three years of the Burmese Government ?

A.—In the Upper Tswai ?

Q.—Is there any felled timber still remaining in that locality ?

A.—Yes, the father of Mee Kyne, the Thoogyee of Bompadee, cut a large quantity in the year 1109 B. E. I heard that there were from 1,000 to 1,200 trees cut by him.

Q.—Did any other party cut timber in the Forests ?

A.—Yes, the people of Bompadee, as well as the villagers of Tseing, cut a large quantity.

Q.—Was the timber thus cut carried away ?

A.—Only a small portion.

Q.—What is the quantity still remaining ?

A.—As far as I have been able to ascertain, there must be about 1,500 trees still remaining, belonging to various parties.

Q.—Are you aware whether the Kareens of Koon-oug under the Tso-kay Lay Quay cut timber during the Burmese Government ?

A.—Yes, I heard from Lay Quay that they had a quantity of timber at a considerable distance from the stream Sitang, near the foot of the hills, but I cannot state the quantity ; all near the river was exhausted. Burmans and others, who traded in timber with the Kareens, also informed me of this, and that the timber they had was at a great distance.

Q.—Was there much timber of small size (yats) cut within the last ten years ?

A.—Yes, whenever posts were required for purposes of Kyoungs, &c., the people supplied the posts by order, wherever they could be found.

Q.—From what streams were they principally obtained?

A.—Principally from Kancee, from Koon-oug, Tswa, and the Kaboung, and Thouk-yai-ghaut streams. Wherever they could find them, green and killed, they were all cut and delivered to the Government here.

Q.—Have you seen the rafts that have been brought down the river from above?

A.—Yes.

Q.—Have you seen any green wood amongst it?

A.—Yes, I have seen a jungle log occasionally mixed up with the others.

Q.—How did you recognize them?

A.—By their floating low in the water, and being secured to the other logs.

Q.—Can you state how many of such trees you have seen?

A.—No, I have only seen one or two such logs, but it would have been impossible to bring down any quantity of such timber.

Q.—From what Forest were those rafts brought, in which you saw the logs of green wood?

A.—From Toung Wen, within our boundary.

Q.—Have you had any opportunity of hearing whether standing trees have been cut lately in the Tounghoo Forests?

A.—Yes, I have people constantly going as traders through the Forests, and if anything of the kind was being done, they would have informed me of it; but it is generally known to every one that there is an order against cutting standing trees, and the people would be afraid to do so.

(Signed) EDW. O'RILEY,

Assistant Commissioner.

Witnesses.

(True Copy,)

(Signed) EDW. O'RILEY,

Asst. Commissioner.

(True Copy,)

(Signed) A. P. PHAYRE,

Commr. of Pegu, and Agent to the Govr. Genl.

B.

*Examination of Nga Kyu with reference to the delivery of timber to
the Executive Engineer.*

Q.—What is your present employment ?

A.—I am the Goung of the sawyers in the Executive Engineer's Department.

Q.—Do you receive timber as it arrives from the Forests ?

A.—Yes, I receive it after having handed in a statement to this Court of the number of logs reported by the owners.

Q.—On the arrival of the wood at this place, is it examined by the Forest Goung or peons ?

A.—No, I am not aware of their ever having examined any.

Q.—During the past four months what number of logs have you received ?

A.—I cannot answer exactly, but I think from 400 to 500.

Q.—From whom were these logs principally received ?

A.—From Tso-kay Lay Quay and Oo Kya.

Q.—From what Forests were they received ?

A.—I cannot say.

Q.—What was the nature of the logs received, green or cured ?

A.—They were all dried or cured logs, with the ends fresh cut into Hloours (loozars.)

Q.—In the whole of the rafts you have received, did you discover any green timber ?

A.—I have not discovered any, but several trees, which after felling have been immersed in the mud and water, and having retained their bark may be mistaken for green wood.

Q.—Were the rafts brought down composed of Teak logs solely, or floated by means of bamboos ?

A.—They were of Teak solely without any bamboos, and had they consisted of green wood they could not have floated without other assistance.

(Signed) EDW. O'RILEY,
Assistant Commissioner.

Witnesses,

(True Copy,
(Signed) _____,

(A True Copy,)

(Signed) EDW. O'RILEY,
Assistant Commissioner.

(True Copy)

(Signed) A. P. PHAYRE,
Commr. of Pegu, and Agent to the Govr. Genl.

C.

Examination of John Pearce, of the 1st Madras Fusiliers, with regard to the timber converted under his superintendence, delivered by the Assistant Commissioner for the purposes of the Executive Engineer.

Q.—What is your present occupation?

A.—I am at present employed in the Executive Engineer's Department as Superintendent of the sawyers.

Q.—What is your trade?

A.—Carpenter.

Q.—Are you competent to state whether the wood you have seen converted is green or cured, that is, dried?

A.—I am.

Q.—How long have you been employed in the above capacity?

A.—About nine weeks.

Q.—In that time what quantity of logs have you converted?

A.—Between two and three hundred.

Q.—What is the timber you have been converting ?

A.—Teak.

Q.—Have you found any green wood in the above Teak logs ?

A.—Yes, four logs only.

Q.—Have you examined minutely all the timber that has been converted by you ?

A.—Yes. When it is brought on the pits, I can see at once by the grain and general appearance of the timber, whether it is green or cured ; and of the whole batch converted under my supervision I have only found the four logs above stated.

(Signed) J. PEARCE.

(Signed) EDW. O'RILEY,

Assistant Commissioner.

(True Copy,)

(Signed) EDW. O'RILEY,

Assistant Commissioner.

(True Copy,)

(Signed) A. P. PHAYRE,

Commr. of Pegu, and Agent to the Govr. Genl.,

No. I.

TABULAR STATEMENT showing the Quantity of Seasoned Timber contained in the Forests of the Sitang Valley, the Promi, and Thanavaddy Districts.

NAMES OF CHOUNGS.	NAT-THAT.				KILLED.				FELLED.				Grand Total.	REMARKS.
	1st Class, measuring 7 feet and upwards.	2nd Class, measuring 6 feet and upwards.	3rd Class, measuring 4 feet and upwards.	Total.	1st Class, measuring 7 feet and upwards.	2nd Class, measuring 6 feet and upwards.	3rd Class, measuring 4 feet and upwards.	Total.	1st Class, measuring 7 feet and upwards.	2nd Class, measuring 6 feet and upwards.	3rd Class, measuring 4 feet and upwards.	Total.		
Upper Koon,	66	80	123	269	19	20	19	58	89	122	131	342	669	
Lower Koon or Ananbow,	50	25	30	105	55	60	14	129	0	0	0	0	234	
Phyoo, above the Rapids,	223	180	209	612	63	49	53	170	192	209	328	729	1511	
Ditto, below ditto,	6	0	0	6	33	33	33	99	9	7	3	19	124	
Bauloung,	0	0	0	0	30	10	100	140	0	0	0	20	160	
Khaboung,	420	370	495	1285	0	0	0	0	0	0	0	0	1285	
Thoutyagat,	100	0	120	220	60	60	80	200	50	100	179	329	749	
Youthawah,	30	40	40	110	115	130	50	315	53	50	40	143	568	
Kanee,	50	90	170	310	70	120	220	410	35	60	46	141	861	
Kayan or Kayin,	40	42	50	132	250	300	375	925	47	40	54	141	1598	
Gwaythai,	30	40	50	120	0	0	0	0	20	40	50	110	230	
Bnyai,	30	40	50	120	20	20	20	60	20	30	40	90	270	
Myotla,	30	30	50	140	20	20	20	60	40	50	60	150	350	
Dounglaangya,	30	40	50	120	20	20	30	70	20	30	40	90	280	
Swah,	159	173	184	516	194	225	190	609	174	262	182	618	1743	
Koon-oung,	35	55	50	140	0	0	0	0	240	445	330	1015	1155	
Total, ..	1299	1225	1681	4205	954	1087	1204	3245	989	1465	1483	3937	11387	

TOUNGHOO FORESTS.

PRIME FORESTS.	Northern Naving,	77	138	164	379	19	27	25	71	149	223	286	656	1106
	Koungzouk,	205	64	69	338	0	4	0	4	47	70	91	208	560
	Middle Naving,	53	102	150	305	29	47	68	144	104	153	237	494	943
	Southern ditto,	229	313	350	892	27	23	38	88	287	351	434	1072	2052
	Shoay Lay,	53	92	140	285	35	52	82	169	117	178	270	565	1019
	Total, ..	617	709	873	2199	110	153	213	476	702	975	1318	2995	5670
BORNEE FORESTS.	Kawleaya,	65	31	59	155	89	77	105	271	59	41	53	163	579
	Bineleh,	35	21	22	78	48	49	52	149	21	28	21	70	297
	Yamwal,	19	15	34	68	0	0	0	0	27	29	15	71	139
	Total, ..	119	67	115	301	137	126	157	420	107	98	89	294	1015
														1015
THARAWADY FORESTS.	Toungvro,	0	0	25	25	0	0	0	0	0	25	0	25	50
	Sin Choung,	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mimbo,	0	25	75	100	0	0	0	0	0	0	125	125	225
	Myottla,	20	25	30	75	30	45	50	125	20	20	50	90	290
	Htoo,	30	70	100	200	100	120	120	340	60	50	100	210	750
	Nuntla,	45	40	120	205	100	150	90	340	50	40	60	150	635
	Mokekha,	35	60	40	135	100	100	100	300	70	50	70	190	625
	Beeling,	50	80	120	250	50	350	300	1000	40	30	80	150	1400
	Total, ..	180	300	510	990	380	765	980	2105	240	215	485	940	4035
														4035
Total of Seasoned Timber,														22107

J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

(Signed)

OFFICE OF THE SUPT. OF FORESTS IN PEQU,
Rangoon, }
The 27th June 1855.

No. II.

TABULAR STATEMENT showing the Quantity of Green Timber contained in the Forests of the Sitang Valley, the Prome and Tharawaddy Districts.

NAMES OF CHOUNGS.	GREEN TREES.				Total.	Grand Total.	REMARKS.
	1st Class, measur- ing 6 feet and upwards.	2nd Class, measur- ing 5 feet and upwards.	3rd Class, measur- ing 4 feet and upwards.	4th Class, measur- ing 1-6 foot and upwards.			
Upper Koon,	904	1549	3845	6148	12446		
Lower Koon or Anabow,	270	475	1800	2520	5065		
Phyoo, above the Rapids,	2471	3669	4822	7990	18952		
Ditto, below ditto,	228	193	480	2180	3081		
Bauloung,	900	50	1200	3005	4455		
Khaboung,	1650	2750	3800	5126	13326		
Thoutaigat,	1500	2000	3000	4820	11320		
Youthawah,	222	1210	8000	13009	22441		
Kanee,	900	1600	950	1700	5150		
Kayan or Kayin,	1500	2500	5500	6850	16350		
Gwaythai,	100	200	300	408	1008		
Bimyai,	500	60	700	1302	2562		
Myottla,	400	600	700	983	2683		
Dounglunga,	300	500	600	1065	2465		
Swah,	1000	16000	50050	60000	127050		
Koon-oung,	950	1950	3680	8360	14940		
Total,	13095	35306	89427	125466	263294	263294	

TOUNGCHOO FORESTS.

FORESTS FROM		2044	3119	4480	6700	16343
Northern Naving,		295	285	315	600	1495
Khoungzouk,		1900	3200	4700	6000	15800
Middle Naving,		2540	3599	4773	5000	15912
Southern ditto,		1700	3200	5100	7000	17000
Shuey Lay,						
Total,		8479	13403	19368	25300	66550
FORESTS BOHNE						
Kawleaya,		195	183	1580	2000	3958
Binedah,		130	88	1330	3496	5044
Yainwai,		140	147	2700	4024	7011
Total,		465	418	5610	9520	16013
THEERRAWADDY FORESTS.						
Toungnyo,		7000	3500	7400	6500	24400
Sin Choung,		0	0	0	300	300
Minboo,		5000	2100	3200	3200	13500
Myottla,		3000	1067	2733	1700	8500
Htoo,		7000	4666	9334	7300	28300
Nuntla,		3500	2520	5040	5000	16060
Mokekha,		8000	4000	8000	9000	29000
Beeling,		10000	10000	20000	15000	55000
Total,		43500	37853	55707	45000	175060
Total of Green Timbery,						520917

OFFICE OF THE SUPT. OF FORESTS IN PE
Rangoon,
The 27th June 1855.

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

No. IV.

STATEMENT showing the Quantity and Description of confiscated and unclaimed Timber sold during the Season of 1854-55.

DESCRIPTION OF TIMBER.	Loozers.	Doogies.	Mast-pieces.	Keel-pieces.	Yard-pieces.	Crooks.	Shimluns.	Shimdoes.	Shimshays.	Yathceets.	Bend Planks.	Doodoes.	Scantlings.	Total.	Net proceeds realized by the sale.			Total Amounts.	REMARKS.
															Rs.	A. P.			
Confiscated Timber,	30	.....	.....	.....	.....	.....	.....	.....	.....	443	.....	.....	.....	473	1656	6	6	.....	Sold by Public Auction.
Unclaimed ditto, .....	...	.....	.....	.....	.....	.....	.....	.....	.....	107	.....	.....	.....	107	182	6	8	1838	
Total Number,	30	.....	.....	.....	.....	.....	.....	.....	.....	550	.....	.....	.....	580	Co.'s Rs.	...	1838	13	2

OFFICE OF THE SUPT. OF FORESTS IN PEGU;
Rangoon.
The 30th April 1855.

(Signed) J. McCLELLAND,
Offg. Supt. of Forests, Pegu.

No. V.

GENERAL STATEMENT of the Classes of Timber passed during the Seasons of 1854-55 and the amount of Duty received.

Numbers.	NAMES OF PLACES.	Loozurs.	Dooies.	Mast-pieces.	Keel-pieces.	Yard-pieces.	Crooks.	Shinluns, per pair.	Shindoes, per pair.	Shushays, per pair.	Yallheels.	Bend Planks.	Doodoes.	Scantlings.	Total.	Amount of Revenue Duty.	REMARKS.
1	Ava,	238	119	0	0	0	0	0	0	0	0	0	0	0	377	745 13 10	
2	Bassein,	0	0	0	2	0	0	0	0	0	0	0	0	0	2	22 8 0	
3	Tharawaddy, ...	113	498	2	0	2	2037	51½	102	7	9624	1	357	133	12923	15379 7 10	
4	Hlaine,	89	1	0	0	12	15	48	20	30	1206	11	94	197	1822	863 11 9	
5	Tounghoo,	0	112	0	0	0	0	0	0	0	0	0	0	0	112	384 7 2	
6	Sitang,	0	88	71	0	41	0	0	0	0	2	0	0	0	202	808 0 0	
Total, No.		460	818	73	2	55	2052	99½	131	37	10322	12	451	332	15444	18204 0 7	

E. and O. E.,

OFFICE OF THE SUPT. OF FORESTS IN PEGU, }
Bungoon,
 The 27th June 1855.

(Signed) J. MCLELLAND,

Offg. Supt. of Forests, Pegu

No. VI.

TABULAR STATEMENT showing the Number of Trees that have been girdled by the orders of the Officiating Superintendent of Forests.

NAMES OF CHOUNGS.	Description.	Number of Logs.	Total.	REMARKS.
Letpan,	2400	.....	} Pegu or Zamayee Forests.
Kadat,	1956	.....
Kyonwee,	400	4756	
Myeegyoung,	500	.....	} Oak-kan ditto.
Kangyoknee Natsin,	1000	... ..
Choungnabyah,	1000	2500	} Thoungzai ditto.
Kodoo Gwai,	300	.....
Thabyoo,	300	.....
Yaysyee,	200	800	
Total Number,.....	8056	

OFFICE OF THE SUPT. OF FORESTS IN PEGU. }
 Rangoon.
 The 27th April 1855.

(Signed)

J. McCLELLAND,

Offg. Supt. of Forests, Pegu.

